ADOLESCENT RESPONSE IN A NUCLEAR AGE: AN EXPLORATORY STUDY

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ABSTRACT

The present study investigates the awareness of New Zealand adolescents towards nuclear issues and towards New Zealand's nuclear prospects in world affairs. A questionnaire was constructed which was used to examine the level of awareness, as well as cognitive, emotional and political reactions to the future in relation to these issues. Five hundred and seventy adolescents (287 males and 283 females) aged 13 to 18 inclusive took part in the study. The results show that the adolescents believed that nuclear war is likely in the future, and that New Zealand has enemies without there being a consensus over the enemies. The results further reveal sex and age differences in attitudes. Females were more pessimistic and less politically knowledgeable than males. Pessimism and cynicism increased with age. The results suggest that while these adolescents were pessimistic about the future in the wider realm, on a personal level they were responding in a positive way with efficacy towards the issues. The qualitative data also indicate that these young people were angry about New Zealand's prospects and towards nuclear issues. Cross-national comparisons are made between the present findings and studies from other nations. The results are further discussed with reference to political socialization and the importance of education in increasing political awareness.

to

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CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

Living in a nuclear age has presented researchers with a new set of issues which health professionals and educators are viewing with growing concern. In recent years, there has been increased northern hemisphere research directed towards the impact of the threat of nuclear war on children and adolescents (e.g. Beardslee and Mack, 1982, 1983; Chivian et al., 1983; Escalona, 1982; Goldberg et al., 1985; Goldenring and Doctor, 1984; Holmborg and Bergström, 1984; Schwebel and Schwebel, 1982; Solantaus et al., 1984, 1985). However, the extent to which findings in the United States, Scandinavia and the Soviet Union apply to adolescents in countries historically and geographically "distant" from areas of overt superpower confrontation has not been so well documented. Australian researchers (Mann and Digby, 1984; McMurray and Prior, 1985) have presented findings with differing results, one indicating a global awareness while the latter showing more egocentrism. Shallcrass (1968), Shallcrass and Gavriel (1982) and Gray and Valentine (1984) were the first studies in New Zealand, the results of which indicate that young people are concerned about the future with regard to nuclear issues, if lacking in-depth information and knowledge.

Historically, the research in this area began soon after the dropping of the first nuclear bomb. Barely two years after the conclusion of World War II, about 10,000 high school students in the United States were

polled by Remmers and others (1947) to discover that the majority of them expected their country to be involved in another war within 25 years. This may in fact be the initial survey of young people in the nuclear age. It was some 15 years after this opinion poll before other studies emerged which assessed awareness and beliefs of United States' children and adolescents about nuclear weapons and the possibilities of war (Allerhand, 1965; Darr, 1963; Escalona, 1962, 1963, 1965; Schwebel, 1965). It was argued that the pessimism about the future as recorded in these early studies was having a destructive and denigrating influence on the developmental processes of otherwise "normal" youth.

The research from the sixties in the northern hemisphere was interpreted as revealing increased youthful fear, anxiety, uncertainty, and a sense of hopelessness and helplessness about the future. There was also evidence of cynicism, apathy, denial and avoidance of the issues which extends through into some of the eighties' literature. The nuclear age was partially to blame for youth's egocentrism and escape into drugs. Failure to adopt long-term goals meant that no plans for the future or hope existed - only impending doom, according to some reports. Tizard (1984) acknowledged these findings, but made worthy comments about the difficulty in validating such assumptions. It had become clear that such patterns in young people had *not* eventuated and some of the more recent research results were found to differ in ways contrary to these earlier findings. Of particular interest was the research which was beginning to surface

from countries other than the United States.

There has been very little investigation of adolescent awareness of nuclear issues in New Zealand. Therefore, it is the aim of this study to ascertain whether adolescents have any formulated ideas or opinions about current issues involving war, peace and nuclear weapons. If so, the intention will then be to ascertain the level of political understanding which these adolescents are knowledgeable and to objectively substantiate the nature of their beliefs. This study's results will then be compared with other New Zealand research findings as well as those from overseas studies.

In Chapter Two, the literature pertaining to adolescent awareness, attitudes and opinions about war, peace and nuclear issues is reviewed, focussing on work relevant to the aims of this study. Chapter Three sets out the research rationale and methods including the instrument for conducting the study and its procedure. Chapters Four and Five contain the results of this study's findings and discussion respectively, with some implications for future research. The conclusions are presented in the final chapter.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

There are many reasons for predicting that the ever present possibility of nuclear war, and all of the associated tensions of nuclear war, should produce a wide variety of human responses. It might also be predicted that such responses would be maladaptive and, in general, difficult to identify and evaluate owing to the nature of attitude research. A review of the adolescent literature pertaining to the nuclear predicament indicates that such studies, to date, are pioneer inquiries which may best serve to promote additional research as well as impress the need for further investigation.

The reactions of adults to nuclear threats have been the subject of a large amount of research by psychologists, psychiatrists and others (Caldicott, 1978; Lifton, 1979, 1982; Schell, 1982, 1984; Thompson, 1985). By comparison, very little attention has been given to predicting how children and teenagers may perceive or react to living in the nuclear age. Differing methods of studying the problem have been employed and relatively little systematic research has been conducted in this area. Longitudinal investigations of international scope have compelling interest; and some of the more recent studies which have not yet gained wide circulation demand closer scrutiny.

2.2 GENERAL BACKGROUND

From the earliest moments of the atomic age, according to Boyer (1986), a spontaneous and well-justified uncertainty as well as fear swept over America; triggered partially by the politicization of terror in lectures, radio programmes, mass magazines such as LIFE and COLLIER'S, and articles like "Mist of Death over New York" in a 1947 READER'S DIGEST. This article described the worst panic known in all human history, and depicted in realistic detail an atomic explosion in New York harbour that sent a deadly radioactive cloud drifting over the city and beyond. . The magazine's editor wrote at this time: "I think that we ... are agreed that a sense of fear is probably necessary to break public apathy." In fact, the earliest literature generally provoked a sense of fear and loathing, with horrors of atomic war depicted in the most vivid imaginable terms. This type of literature remains the most widespread today, supported by a large number of research scientists, psychologists and political activists. In recent times, however, researchers have found that apathy and self-centredness may prevail as well in response to a nuclear awareness. These attitudes may be tied to the envisaged proximity (or alternatively the *lack* of proximity) to the imminent danger of the nuclear threat. Less prolific is any research suggesting much hopefulness or optimism about the atomic age.

Frank (1960) and Osgood (1962) indicated that as a direct result of the cold war crisis situation, people were numbed to the circumstances because of its over-

whelming nature and the requirements of very rapid adjustments. They claimed that this contributed to a turning away from rational solutions and towards traditionalism and nationalism. "Psychological numbing" is a concept which Robert J. Lifton coined in his book, THE BROKEN CONNECTION (1979) to describe in neo-Freudian terms the defence mechanisms which have evolved in "learning to live with the bomb". Political and military leaders as well as scientists are able to "get on with things" by excluding their personal feelings - a combination of blocking and absence of images. Among the general population, this immobilising condition is often tied to either apathy or to a feeling of helplessness and hopelessness, according to Beck and Frankel (1981) and other theorists. The psychological mechanisms which come into play include avoidance ("I don't want to think about it"), resignation ("If it happens, it happens"), and a blocking of feeling. This blocking tends to lead to the result that people go about their daily business as though the nuclear threat does not exist. It is this phenomenon of psychological numbing which researchers have come to recognise as being the most paralysing; for although too much anxiety inhibits one from taking action, so too does emotional numbing (Boyer, 1986; Sandman and Valenti, 1986).

Kraus, Mehling and El-Assal (1963) claimed that reactions of populations to danger (varying from mass hysteria to general apathy) provoke perplexing problems for attitude research. Boyer, Sandman and Valenti have most recently stated that the very research literature

which some anti-nuclear activists and researchers have published has served to achieve opposite and opposing effects to what may have been desired or to what has indeed been expected. Much of the early literature and that which has followed may have unwittingly contributed to a nuclear build-up on the part of government policy* as a consequence of public attitudes.

Volkan (1985) takes the phenomenon of nuclear proliferation further by suggesting that people (and consequently governments) *need* to have enemies; that there is a natural, psychologically based necessity to have adversaries in order to maintain and regulate their sense of "self". Frank (1982) says that the "image of the enemy" is universal. When threatened by political or military conflict, members of any group revert to childhood ways of reinforcing their bonding. Volkan sees this need as the basis of political psychology and that such character traits are crystallised in adolescence. The cogency of this developmental approach suggests that youthful attitudes must be tapped and better understood.

Much of the adolescent literature to date comprises research which is largely anxiety-based, full of fear, helplessness and hopelessness, or apathy and denial. Only very recently have there been some studies to indicate emotional responses which might lead to possible useful action, if the theorists are correct.

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* Such government policy had the effect of distracting its citizens from internal problems such as minority group pressures, economic and social inequalities and unrest in the United States. This was *not* the motive of those anti-nuclear activists who continue to use fear tactics in an effort to stir public action.

The following literature review is presented chronologically by decade, beginning with the 1940's and 1950's, then turning to the 1960's and 1970's, and concluding finally with the most current youth-orientated research relating to the nuclear threat in the 1980's.

2.3 YOUTH RESEARCH FINDINGS IN THE 1940's AND 1950's

The work of J.B. Watson during the early part of the century established that fear is an emotional response with psychological underpinnings. It was not until nearer mid-century, however, that fears of a political nature were more selectively examined. Generally, investigators disclosed that lower socio-economic children tended to have more fears than upper socio-economic children (Angelino, Dollins and Mech, 1956). Girls were reported to hold more fears than boys, Negro children more than Caucasian children and that fears in young children increased with age (Jersild, Goldman and Loftus, 1941; Lapouse and Monk, 1953; Pratt, 1943). Fear of animals was recorded as the most common fear along with supernatural events and beings, as well as their own personal safety. Gastwirth and Silverblatt (1943) found little or no difference in the number of fear reactions towards war among "normal" young adolescents of different intellectual levels. From childhood to adolescence, various studies (Angelino and Shedd, 1953; Lapouse and Monk, 1953; Pintner and Levy, 1940) were not in agreement as to the most prevalent types of fears. Of these studies, only Angelino and Shedd established that political fears were reported by older adolescents.

The Purdue University Division of Educational Reference polled 10,000 high school students throughout the United States in 1947 to establish how young people looked at war and peace. Remmers, together with other members of the Division, found that almost half of their sample believed that the United States would fight in another war within five years, while two-thirds expected their country to become involved in another war within the next twenty-five years. This survey was conducted before the Soviet Union tested their first atomic bomb in 1948.

2.4 YOUTH RESEARCH FINDINGS IN THE 1960's AND 1970's

Studies in the early 1960's occurred at a time of heightened cold war tensions between Western powers and communist bloc countries. Research undertaken by Adams (1963), Allerhand (1963), Escalona (1962, 1963 and 1965), Schwebel (1965), Wade (1962) and Wrightsman (1964) assessed the awareness and beliefs of American young people about nuclear weapons and the chance of war. Apparently, some of these studies were prompted by the Berlin Wall and Cuban missile crises.

A majority of those interviewed during this time spontaneously referred to nuclear weapons and war. Allerhand is one researcher who has suggested that these young people were aware and reacting to the cold war situation. His investigation (an indirect approach which acquired reactions of youth through parents' report) indicated that 70% of young people talked spontaneously about war-related topics. Allerhand (1963)

reported that 35% of parents heard their primary school children express concern and presumably some emotional reactions about becoming sick from fallout or fear of actual attack. These children, who came from some 200 families, revealed more concern about their own self-protection than an awareness about the needs of others; although their attitudes generally reflected a world view in their thinking about the future.

Escalona (1963) reported that more than 70% of her sampling of about 300 youth aged 10-17 spontaneously mentioned the issue of war and peace when asked to project into the world of the future. In this questionnaire, there was careful avoidance of any reference to the bomb or war. Escalona simply asked: "Think about the world as it may be about ten years from now. What are some of the ways in which it may be different from what it is today?" Replies included visions of a gruesome existence underground, or in terms of possible wholesale destruction. Escalona concluded that youth of all ages were responding to the dangers of a nuclear war.

A much larger study by Schwebel (1962) came to very similar conclusions. In sum, from a sample of 2500 young people, the majority said that in the event of a nuclear war they would have the most to lose. Generally, in response to questions about nuclear conflict, they said that they would pay the biggest price. They were bitter about being denied a chance to live, to love, to work, to bear children and raise a family. They would lose, they felt, the largest

portion of their lives, and they would miss the opportunity to enjoy the pleasures they had hardly even begun to taste, according to Schwebel. When asked what they expected if there were a nuclear war, many of the responses were eloquent in their simplicity: "I will die", or "We will all die." Most of those who thought that they might live, nevertheless felt that their fate would be as bad as death. They were confused about wanting and hoping to be safe if it meant enduring a bomb shelter existence. Schwebel reported that there was virtually unanimous concern about the prospects of nuclear war, although the "brighter" and older students were more optimistic. He suggested that those subjects who were free from survival needs faced the social crises in a different manner than did those who were more tied to satisfying their primary needs. Schwebel commented in his discussion that the higher aptitude and better-informed classes of students at all levels tended to oppose the bomb shelter programme. They believed that there was little value in the shelters.

Remmers joined together with Blumenfeld and Franklin in a 1962 Purdue Panel to poll youth attitudes towards civil defence and fallout shelters. Of the 2,000 high school students, 78% reported that they had heard at least some talk about fallout shelters in their home. At all ages there was clear evidence of an awareness, with 37% believing that the possibility of war was likely, 43% thinking that there was at least a fifty-fifty chance, and only 17% believing that war was unlikely. For information about defence matters,

subjects turned to media sources in 64% of the cases.

During this same year, Wade (1962) conducted a study of indirect method or disguised approach in the form of a sentence completion test. School leavers and first-year university students were asked to complete sentences like: "My greatest fear regarding the future is..." and "I worry about..." Although 23% of the sample of 600, in answering the first question, used words relating to war and weapons, this was small compared with those who indicated personal fears relating to school, family, marriage and career. The item on worry showed the same pattern, but more sharply - with only 4% making any mention of war, security or survival. Wade concluded that less than 4% could be described as greatly affected by nuclear war threat, and that less than 8% of his first-year university student sample responded to the fear-of-the-future item with war-related words. Considering that the purpose of Wade's study was not known to the subjects, and the nature of the open-ended questions gave them several opportunities to express fear of war, the results contrast with earlier findings thus far. On the contrary, Wade used his study as evidence that this kind of fear or anxiety decreases with age.

A study by Adams (1963) also confirmed that attitude and opinion change with age. From a sample of 4,000 young people, opinions were sought as to the major problem of the country. The one mentioned most frequently was "war with Russia", but in increasing age groups (from 10-19) there was a steadily decreasing

percentage of those who named this as the major problem. Both Adams and Schwebel established that almost 50% of their samples believed a war was possible or likely.

In a questionnaire study of 400 young adolescent boys, Wrightsman (1964) found that almost 60% worried "some, a lot, or all of the time" about a war starting, and 70% expected war within the next 20 years. The pessimism about the future which was recorded in these early studies, particularly those involving younger age samples, resulted in speculation that the threat of war in general, and nuclear war in particular, might be having a destructive and maladaptive influence on developmental processes in otherwise "normal" well-functioning American children.

Notable research of international scope was the Mankind 2000 Project, administered in 1967-68 under the direction of Johan Galtung (1969). A questionnaire was devised in Europe, involving 14 countries and 11,000 people between the ages of 14 and 40. The object was to discover the attitudes of the age group who would be providing much of the influence in their respective countries by the year 2000 A.D. Galtung made clear that the research would have no predictive value; that it only intended to tap attitudes at that time. A condensed summary of the major findings in the student samples (which came from West Germany, Britain, New Zealand, Sweden and the United States) indicated that students were highly exposed to and concerned with the future, especially the future of the world. At the same time, they were very present-orientated, carrying many of the

perspectives of the countries in which they lived. They lacked a map of the future and the future did not seem to have a direction for them. They knew better what they did *not* want, did *not* accept and did *not* believe in than the opposite. Students tended to have a more gloomy view of the present and future standing of the world than older subjects in the sample. They were the most sceptical about peace proposals.

Galtung is credited with having established the conceptual dimensions of "negative peace" and "positive peace". The former he defined as absence of organised violence or war between groups or nations. Peace is here seen as a state of passivity and absence of contacts between such groups or nations. The latter concept is defined as something like co-operation patterns, and aims at integration between groups or nations. Peace in this context is seen more as an active process, where contacts are exchanged and activity is expressed. Galtung believed that it was important to differentiate between these two concepts because he did not consider peace to be merely the absence of war.

In 1968, Shallcrass administered to New Zealand schools a questionnaire which was patterned after the Mankind 2000 Project. He found that over half of the sample of 600 sixth formers thought about the future of the world and talked and read about it. Only 11% had a very pessimistic view for themselves, their country, and the world. Generally, opinion was optimistic, although 23% thought people would be less happy, 48% thought families would become less attached, 26% thought there

would be less job satisfaction, and 25% thought that there would be lesspersonal kindness in the future. This sample revealed that students were cynical about science and its ability to influence what were seen as important elements in life. On the question of the possible influence of science on peace, 83% hoped it would have a positive influence, but only 10% thought it would be effective. The gap between hope and expectation was large. On the likelihood of nuclear war, 38% believed that there would be a world war within 20 years; however, 30% believed that total disarmament was possible. Given there was a war, however, 80% believed that there would be total destruction or, at best, irreparable losses. Only 15% believed that New Zealand could stay out of a world war. Forty per cent believed that there could be justification for conventional warfare and only 36% could see no justification for war. In terms of nuclear war, however, 68% believed it was unjustified.

Shallcrass found his 1968 sample to be sceptical of peace propositions, and females were significantly more pessimistic than were males. Nevertheless, females expected to exercise increasing control of their own lives where males thought there would be more external control. Females were more concerned for the general good than for the individual good, whereas males reversed this choice. Shallcrass suggested that although pessimistic, the female profile may be more realistic given the big political issues. Generally, though, there was an overwhelming enthusiasm for peace and

strong support for those policies which were expressions of hope.

A cross-cultural comparison of British and Japanese youth was undertaken by Cooper (1965). About 350 young people aged 7-16 were asked to relate their images of "war" and "peace". He considered that children less than 7 years old would not have an awareness of war and peace, but by 8 years old, that their images would be fairly defined. His results from interviews indicated that "peace" prompted fewer responses than "war", that justification for war grew more necessary with age, and that fewer females than males believed war is justifiable. More females believed that war is more likely and that they would survive it. By age 11-13, youth seemed to be aware of the destructive effects of a nuclear conflict, but nevertheless felt somehow that they would escape it. In fact, Cooper identified a tendency at all ages for youth to subjectively view their own personal probability of survival of a nuclear war as being better than others. Weinstein (1980) has labelled this hopeful outlook on life as "unrealistic optimism", a bias which he confirmed from studies with an older age sample's perception of various life events.

Japanese youth tended to differ from the British sample in that they were more aware of contemporary events, people, countries, and personalities than British youth. Japanese youth tended to have a more concrete concern with war weapons, were less concerned with fighting and were more vehemently against war.

They were preoccupied with peace and activities which actively expressed more protest and anti-war associations. Japanese respondents were more optimistic about the future of nuclear energy, less likely to predict a war in the future and were more preoccupied with peace as an international movement, compared with British youth. The results were consistent with certain findings about attitudes as reported by Galtung (1969).

Ålvik (1968) replicated Cooper's investigation in part, having dropped what were considered to be provocative questions. In interviews with 170 Norwegian youth, Ålvik concluded that older ones make more use of available sources of information concerning war and peace. With age, the subjects increasingly made more use of all the sources mentioned to them. Young people from higher socio-economic levels tended to converse with their parents more. However, the main agents for socialisation were the media. Socio-economic background seemed to play a greater role for youth with higher abilities in reciprocal reasoning, but not with utilisation of available sources. Ålvik indicated that reciprocal reasoning as well as the type of socio-economic background played an important role in the moral judgment of war.

Rosell (1968) conducted an exploratory study in Sweden in the same year, patterned after Cooper and Ålvik's studies. He found from his sample of 200 that females mentioned more about war consequences and less about war processes, while males were the opposite. His subjects perceived peace as the negation of war, a trend which is supported in other studies. While

female "will to defend" tendencies increased with age when their family was concerned, male "will to defend" friends decreased with age. His results confirmed items in Cooper and Ålvik's research with the dimensions of war being perceived mainly as "war processes" and "consequences". The concept of "peace" was mainly perceived as a state of stillness or silence and not as an active process towards integration.

Kramer, Kalick and Milburn (1983) examined responses to nuclear-related survey items from 1945-1982. They found that one indicator of public concern regarding nuclear weapons was the amount of public opinion polling on the subject at different points in time. In fact, there was a significant positive correlation between their item count and a count of magazine articles concerning nuclear items over the years. Peaks in item counts corresponded to the initial American use of atomic bombs (1945); the Soviet acquisition of the hydrogen bomb (1953); the cold war crises of the early 1960's; and anti-nuclear political activity in the West (from 1981 onwards). Lowther (1973) correlated first-year university students' sense of powerlessness regarding nuclear weapons with their feelings of complacency on the subject. However, apart from this Kansas study and a task force formed by the American Psychiatric Association in 1977, research which tapped on nuclear attitudes was noticeably lacking in the 1970's. Consequently, this literature review resumes with current studies which have taken form in the 1980's.

2.5 YOUTH RESEARCH FINDINGS IN THE 1980's

Tizard (1984) outlined a fairly extensive review of developmental research on young people's understanding of nuclear issues in the 1980's while highlighting problematic aspects of such research. Studies which she has already examined will only be referred to in brief.

In 1977, the American Psychiatric Association formed a task force to look at the "Phychosocial Aspects of Nuclear Developments". Between 1978 and 1980, questionnaires were administered to approximately 1,000 students aged 10-18, from Boston, Baltimore, Philadelphia and Los Angeles in the United States. More detailed responses were obtained through questionnaires and discussions with 100 students aged 15-18. In this very widely-cited study by Beardslee and Mack (1982), more than 50% of one sample surveyed thought that a nuclear war was possible and the great majority did not believe that they could survive a nuclear attack. They reported that the possibility of nuclear war had affected their plans for marriage or having children. The interviews revealed uncertainty, anxiety, helplessness and a sense of hopelessness about the future. There was also much sadness, cynicism and bitterness among these adolescents, owing to a lack of trust of adult society, as well as being faced with the prospect of inheriting a world verging on doom.

Other recent investigations involving both questionnaire and interview studies have supported these findings - that many young people are aware of the threat

of nuclear war and live in fear of it (Bachman, 1983; Chivian et al., 1985; Chivian and Snow, 1983; Escalona, 1982; Goldberg et al., 1985; Goldenring and Doctor, 1985; Goodman et al., 1983; Gray and Valentine, 1984; Holmborg and Bergström, 1984; Mack, 1981; Mann and Digby, 1984; Schwebel and Schwebel, 1982; Smith, 1982; Solantaus et al., 1984, 1985). Further, there is evidence that preoccupation with these issues among youth has increased over time. According to Bachman (1983), in 1975, 7% of about 20,000 10-17 year olds polled in 130 schools around the United States said that they often worried about the chance of nuclear war; whereas in 1982, the corresponding figure was over 31%.

In the American Psychiatric Task Force Report, Beardslee and Mack suggested that adolescent personality development may be distorted by fears of imminent annihilation. Healthy development, they argued, depended on an adolescent's ability to reduce disappointments by looking forward to a future time in which they might possess what cannot be had now. An individual's establishment of enduring values depends upon the delay of present satisfaction in favour of future goals. But they suggested that: "...such development is compromised in a setting (where) a future appears to have been destroyed by the adults to whom its preservation (has been) entrusted" (1982, pp. 90-91). Escalona wrote: "To the extent that the present functioning of society conveys to our (youth) a picture of...withdrawal, of fear...towards other nations, ...to that extent the effects of the nuclear peril upon us also affects the

development of (youth)" (1982, pp. 606-607).

The Institute of Social Research at the University of Michigan administered to high schools across the United States a survey entitled, "Monitoring the Future" (Smith, 1982). The questionnaire included the following questions: "Of all the problems facing the nation today, how often do you worry about the following?" Problems addressed in the questionnaire included "crime and violence", "economic problems", "race relations", and "chance of nuclear war". Students responded by choosing between "never" and "seldom", "sometimes" or "often". Over an 8 year period, the proportion of the sample of 16-19,000 senior high students who often worried about the chance of nuclear war increased fourfold. If the categories are collapsed to include "sometimes", the trend goes from 40% to 64%. In response to the statement, "My guess is that this country will be caught up in a major world upheaval in the next 10 years", 43% of the males and 21% of the females agreed. In response to the statement, "Nuclear or biological annihilation will probably be the fate of all mankind within my lifetime", one-third agreed. Citing the Michigan Institute of Social Research data, Yankelovich (1982) linked the shift specifically to the perceived threat of nuclear war and the sense of futurelessness that results from it. An associate of Yankelovich, Elisabeth Noelle-Neumann, reported that "no future" was a widespread slogan among young people in West Germany. Similarly, Yankelovich reported despair, gloom and a sense of grimness in West Germany, Sweden, Britain,

throughout Western Europe and the United States. He related that the mood of the future was very threatening - one of shortages, greater difficulty and a closing in of horizons.

The data from the United States tends to dominate the literature with many of the conclusions having a similar mood of distress and disillusionment. The United States' research may in part be a reflection of the researchers' emphasis, but it may also show that young people may differ in numerous ways, not least of all by their nationality and experience. It has been found that some studies undertaken outside of the United States have some differing conclusions.

Indications from Elder (1965) and more recently from Tizard (1984, 1986) have suggested that in spite of the studies' conclusions, there is still very little scientific evidence to support such claims. Elder cautioned making generalisation or basing belief on logical inference. He wrote: "We forget that our (youth) are maturing in a world which to us is bizarre but to them commonplace. (Young people) accept the world as they find it, and, lacking the broad perspective of adults, do not have the same basis for anxiety" (1965, p. 123). Tizard said that although the assumptions (about how youth are reacting) seem reasonable, that there is difficulty with accurately assessing this "impact". She is concerned with these methodological problems. The remaining research studies are arguably no more rigorous in their assessments; however, they do offer differing results, which set them apart.

Chivian, Mack, Waletzky, Lazaroff, Doctor and Goldenring (1985) undertook a study of 540 Soviet subjects to be compared with an age-matched Californian sample of 900. Soviet adolescents were found to possess optimism quite contrary to other survey research. This attitude in no way discounted their unanimous concern that the prospects of a nuclear war were very disturbing, but they were of the opinion that nuclear war would *not* eventuate. By comparison, the majority of Goldenring and Doctor's Californian sample expressed much pessimism about the future. These same pessimistic adolescents were found to be the most mature and better academically of their group, contrary to earlier research that found "brighter" students to be the more optimistic (Schwebel, 1965). The Soviet optimism may be attributable to their involvement in peace-related activities - an observation made by Goldberg and her colleagues in a recent Canadian study.

Goldberg, LaCombe, Levinson, Parker, Ross and Sommers (1985) considered that while their data indicated that thinking about nuclear issues does appear to elicit many worries in young people, it was possible that the very asking of such questions stimulated more anxiety and worry than students actually experienced in their everyday lives. Consequently, the direct questioning strategy may in fact be creating the anxiety it is supposed to be measuring.

With this in mind, an open-ended questionnaire was designed incorporating questions modelled after the Californian/Soviet study and a Finnish study which had

been conducted just prior to their research. The survey was administered to 2,000 Ontario subjects, divided into two samples. The first sample was carried out in metropolitan high schools, half of which were comprised of immigrant groups (Chinese, Italian and Portuguese) and the other half of which were Canadian-born. The second sample were largely English-speaking Caucasians of middle and lower socio-economic status. The findings indicated that the nuclear threat was a future concern. Nuclear war was spontaneously mentioned by over half of both samples, but it was suggested that the concern with the threat of nuclear war was not more intrusive than other worries and did not necessarily lead subjects to foreclose their personal futures. Nevertheless, a large group were classified as helpless, with an inability to express their fears. Only a minority were willing to acknowledge their anxieties. This minority group was also optimistic that constructive action could be taken, and had a stronger sense of personal and social efficacy than the rest. In fact, those who were most often fearful and anxious about the threat of nuclear war were also those who felt the *least* helpless, whereas those who said they had not felt fearful and anxious also expressed the strongest feelings of helplessness. Socio-economic status was not a determinant of whether or not students worried about nuclear war. However, it was concluded that those who worried most about nuclear war also worried most about personal plans.

In an on-going Finnish study, worries about nuclear war were placed in a broader context by using a

general health questionnaire to ask 5,600 students throughout Finland about the future. Solantaus, Rimpëla and Taipale (1984) and Solantaus, Rimpëla and Rahkonen (1985) confirmed that a large percentage of their samples mentioned fear of war; although, older subjects expressed more optimism and ideas which were efficacious. Fears of war *and* hopes for peace declined with age, with the former largely outweighing any projected hopes for peace. Females expressed stronger fears of war than males and like Rosell (1968), females were more concerned with war consequences than processes. There were also interesting socio-economic differences in their sample. While Coles (1984) suggested that preoccupation with the threat of nuclear war was a middle-class issue that did not affect the lower socio-economic class, Solantaus found that the highest (upper white collar) *and* the lowest (unskilled worker) groups (a) thought about war the most, (b) discussed war and peace the most, and (c) were most optimistic about their own possibilities to prevent war. These findings contrast with Croake and Knox (1973) whose lower socio-economic group of subjects reported significantly more political fear than the upper socio-economic status group. Blackwell and Gessner (1984) found that Negro young people were more fearful and pessimistic than Caucasian youth, but it is not clear whether this may be an ethnic rather than a class difference.

Possibly of most current interest, Solantaus and Rimpëla (in press) confirmed that those who had discussed issues of war and peace with others were more

confident in their own ability to contribute to the prevention of war. Thinking and anxiety tended to correlate positively with confidence. Their data suggested that these discussions support these youth in facing up to the anxiety and in coping with the situation by social action. Other findings were that subjects had increased hope in areas concerning work, education, human relations and material aspects of life and these hopes became more frequent with age. Solantaus implied that this increase in areas of personal concern was due to the phase in adolescence preoccupied with such issues. The Melbourne study which follows has come to similar conclusions.

A Melbourne study by McMurray and Prior (1985) looked at 100 Australian adolescents' level of involvement in nuclear issues by specifically focusing on how they answered a question asked in three different ways (open-ended, picked from a list and closed-response type). They found clear inconsistencies in response to these items, confirming that the way in which a question is asked is important.* It was clear from their questionnaires that for the majority of the subjects, other problems were seen as more important to them than nuclear issues. A large majority of their sample were optimistic about the future, suggesting that Australian youth may feel geographically "safe". While one-third of their sample did report feeling anxious about nuclear issues, their anxiety appeared not to affect their outlook for

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* Galvin (1986) reported a similar finding from an opinion poll conducted by the Defence Committee of Inquiry in New Zealand.

the future. As occurred with some of the older Finnish youth, they expressed involvement in more egocentric issues of immediate concern. With respect to efficacy expectations, students who had had peace studies in schools were distinct and different from the rest. It appeared that with increased awareness comes also an increased sense of self-efficacy. This final conclusion was shared by the Canadian, Finnish and Soviet studies.

Results from another Australian study, however, have some differing conclusions. Mann and Digby (1984) conducted open-ended interviews with over 300 Sydney young people who were decidedly more pessimistic, with over half spontaneously mentioning nuclear war as a major concern. Their expectations of the future indicated that they felt angry, fearful and helpless. Two-thirds believed that nuclear war was likely to happen and even more of the sample expected another world war. This sample was found to have a reasonable level of knowledge about the destructive power of nuclear weapons even though the average age level was younger than the Melbourne sample. Mann and Digby concluded that their results go against the preconceptions that, in general, youth (and specifically Australian youth) are not aware of or affected by political issues. Their results suggested that Australians are not insulated from such influences by geography, history or complacency.

A New Zealand study by Gray and Valentine (1984) indicated that a sample of nearly 900 students were poorly informed and lacking knowledge about nuclear

issues, even though nearly all admitted to having seen, heard or read something about nuclear weapons. The majority wanted to know more about the issues raised, however, and were not apathetic. Nearly one-quarter predicted a world war by 2000 A.D. and very few believed that arms reduction was possible. Generally, females were more pessimistic than males, with males justifying war more readily. Eight per cent believed that nuclear war could be justified with 31% believing that there was nothing New Zealand could do to prevent it. This is not to discount those who offered a wide range of suggestions as to what *could* be done to prevent nuclear war.

Compared with Shallcrass (1968) and Shallcrass and Gavriel (1982), Gray and Valentine's results were low for those who believed that there would be a world war, but similar in terms of the possibility of arms reduction. Shallcrass and Gavriel's 1982 sample were only half as likely to believe that partial or total disarmament was possible compared with the 1968 sample and over one-fifth thought nuclear war could be justified (which is more than three times those who believed similarly in 1968). The 1982 sample of 600 revealed a marked increase in uncertainty about policies that were held in some hope in 1968, with more reservations about the future and a tendency towards more self-centredness - away from concern for the general good. In fact, while these New Zealand studies indicated a general pessimistic trend and uncertainty, Shallcrass and Gavriel maintained that there was still strong support and enthusiasm for peace

proposals, even if these adolescents were sceptical. These researchers noted that some of the data were open to interpretation. This fact has plagued attitude research in this area since its outset.

Some other New Zealand research findings by Taylor, Patten and Chung (in press) are similar to the Finnish study. Even the most pessimistic of their sample were not entirely despondent, even though one-quarter thought that nuclear war was likely, over half thought that New Zealand would not survive one and nearly three-quarters thought that there was little that they could do about it. What seemed most important was that subjects were not resigned to inactivity in the matter. Those subjects who worried either frequently or all the time about nuclear warfare *also* felt more able to do something to prevent such a war. In another study, Prior, Patten, Mellsop, Taylor and Wagemaker (in press) found that those subjects who were more worried about the nuclear threat also talked more about it with others - results which are consistent with the Canadian, Finnish and Soviet data.

Although it might be assumed that Jewish and Arab young people might have very differing attitudes and future expectations, Spielmann (1986) has found many similarities. Unlike findings by Cooper (1965), Ålvik (1968) and Rosell (1968), Israeli youth of both ethnic groups have projected more active than passive attitudes about peace. This research was based on compositions from over 1,200 essays about "Thoughts about Peace". Nevertheless, with increasing age, peace was seen generally as an unrealistic ideal of doubtful desirability. Younger

age groups expressed more scepticism about the possibility of peace. Similar to previous studies, these young people believed that it was something beyond their own influence or control, and that peace has a price.

Newcombe (1986) believed that the threat of nuclear war (and accidents) was significantly related to psychological distress and may disturb normal maturational development. Given this assumption, he devised a nuclear attitudes questionnaire (NAQ) in order to better measure young adults' concern, support, fear and denial which together he claimed represented a second order construct of anxiety. Findings indicated that females who sat the NAQ were more concerned, less supportive of nuclear-related advancements, more fearful of the future, however, expressed less denial. Newcombe found that nuclear anxiety was associated with less purpose in life, more depression, more drug use, less satisfaction and more powerlessness.

Many attitudes and emotions have surfaced from the literature, with fear and anxiety (accompanied by associated helplessness and hopelessness) generally being the most pronounced expressions, followed by a more self-centred group who seem to be either apathetic or psychologically numbed. By comparison, little appears in the literature about those youth who feel angry and incensed at the world situation. Goldenring and Doctor (1984) reported such attitudes and Mann and Digby (1984) also made mention of anger as one of several reactions to the threat of nuclear war. Beardslee and Mack (1982) and, previously, Schwebel (1965) had cited bitterness

among youth. Gray and Valentine (1984) quoted excerpts from comments which included: "It gives you a feel of hate for those people who play with these dangerous toys..." and "I really hate nuclear weapons." Further confirmation of angry feelings comes from a study by Holmborg and Bergström (1984). Swedish young people aged 13-15 thought that adults were very little concerned about the nuclear threat, and these particular adolescents felt quite angry about this lack of concern. This sample rated nuclear war as their greatest worry, out of a choice of fourteen items, and over one-quarter of these youth expected nuclear war in their lifetime. Considering that this younger adolescent age group were, according to the other research, a group most commonly cited as feeling fearful, helpless and hopeless, this Swedish sample together with some recent findings about adolescents from the United States, Australia and New Zealand convey an emotional reaction which Sandman and Valenti (1986) believed has useful channels for action - energy for action that is otherwise bound up in fear or depression. What makes Holmborg and Bergström's general findings different is the focus on this mode of dealing with the threat of nuclear war.

In the present study, with respect to a New Zealand sample of young people, it proved possible to examine both the New Zealand and some overseas findings relating to adolescents' attitudes and opinions towards nuclear issues. After investigating the findings, the present study hoped to determine whether these youth are affected in ways similar or counter to the literature.

CHAPTER THREE

METHODOLOGY

3.1 RATIONALE

This study is part of a field of research progressing along the lines of work begun under the direction of Johan Galtung (1966) of the University of Oslo. Similar research has subsequently been conducted in New Zealand by Jack Shallcrass (1968, 1982), Victoria University of Wellington. Drs Ben Gray and John Valentine (1984) of the International Physicians for the Prevention of Nuclear War have also published results from a New Zealand survey which they conducted in North Island secondary schools.

This study proposed to compare political attitudes and opinions of adolescents to establish their awareness of, or knowledge of nuclear issues in particular. The study aimed to follow a strategy similar to other New Zealand studies, while extending the scope of the research into adolescent political attitudes. It was also intended that the results obtained from this study might be comparable with results obtained by other investigators in New Zealand, Australia and the northern hemisphere. This study hoped to reflect current issues, concerns and the level of political consciousness of the subjects surveyed, and planned to examine implications for school curriculum studies. No hypotheses were formulated because the research was undertaken as an exploratory empirical study to advance knowledge.

3.2 RESEARCH DESIGN

There is a growing amount of research dealing with adolescent attitudes towards war, peace and nuclear issues. However, few of the studies can be compared directly due to the differing forms of measurement and methodology employed. The study reported here attempts to replicate, in part, certain aspects of previous research, in order that inter-study comparisons might be made. To this end, a social survey design was used, incorporating a subject-administered questionnaire.

3.2.1 The Study-Design Stage

Having decided to conduct a survey, a population in the South Island was required. A district with four schools comprising varying socio-economic groupings and backgrounds was approached.

3.2.2 Anticipatory Data Analysis

A larger sampling of the population was manageable due to the structuring of the questionnaire. No open-ended questions were included. Instead, a series of closed-response items in the form of attitudinally-scaled and forced-choice questions were used. These provided a uniform frame of reference for respondents to use in determining their answers to each question. Statistical analysis could then be tabulated and age/sex/school comparisons could be made.

3.3 THE SOCIAL SURVEY

3.3.1 The Pilot Study

A pilot study was constructed and tested in an attempt to investigate the specific areas of research and to scrutinise the wording of questions to be included in the survey. Several revisions were required to clarify ambiguities. The final revision of the questionnaire was administered to a pilot sample of 10 subjects. It was determined that comprehension of items was satisfactory and that the average time taken for completion was about 20 minutes, which was considered practicable.

The questions included were items which

- looked at the subject's present attitudes and opinions about various issues,
- were relatively easy to administer and compute (closed-response type), and
- were considered to be appropriate for the subject population.

3.3.2 The Questionnaire

A 10 page questionnaire (see Appendix I) comprised the social survey. The questionnaire was designed to elicit information about the respondent's level of political awareness, attitudes and opinions towards nuclear issues in particular, and New Zealand's political prospects in world affairs generally. The questionnaire consisted of 4 sections:

(a) The first section contained 20 questions which were intended to gauge the subject's attitude

towards the future in relation to themselves, their country and the world; whether they believed human destructiveness was innately determined or not and whether they expected nuclear conflict as an inevitable scenario. They were asked about their expectations and whether or not they were optimistic about the future. A 7 point equal-appearing scale was used in this section because it had the advantage of rendering finer distinctions between subjects according to the attitudes which they possessed. In the analysis of data, the scale has been collapsed to 4 categories:

ATTITUDE (1 - 2) - yes, very much (agreement)
(3 - 4) - moderately more (agreement)
(5 - 6) - moderately less (agreement)
(7) - not at all; or (disagreement)

e.g. *My life* will be better in 15 years. ATTITUDE 1 - 7

(b) The second section of 30 questions asked more directly about what they knew about nuclear issues; where they obtained their information; if they thought conventional or nuclear warfare could be justified; whether the prospects of a nuclear conflict would affect their future plans; whether they approved of New Zealand's ban on nuclear ship visits; whether they ever dreamt about nuclear war or would want to survive it if it happened, as well as questions pertaining to the super-powers' determination to arms reduction. Subjects were once again asked to think about the future - this time in terms of peace, co-operation and less conflict between countries. A checklist and categorical response mode was used in this section.

e.g. Does New Zealand itself have any foreign *enemies?*

Y / N

(c) The third section was patterned after Sidanius (1976) and Jamieson (1978) incorporating 34 items which had been generated by a sample of independent assessors from politically-opposed organisations. It was intended to establish a scaling format which might measure and/or have the discriminative power to index conservative beliefs, values and attitudes. A three-response category mode was used, and the scale content was divided between positively and negatively keyed items. The subjects were asked to rate each of the items by responding "yes" if they had a positive reaction, "?" if they were unsure or had no opinion, or "no" if they had a negative reaction to the item. Conservative responses were "2" points, "?" rated "1", and non-conservative responses were scored "0". Four items in Section III were not discriminative, leaving a total of 30 items to be scaled.*

e.g. A.N.Z.U.S. (Australia/N.Z./U.S.A. Treaty) Y / ? / N

(d) The final section contained 2 questions pertaining to demographic details with space provided for personal comments. Comments were optional, however, and not required.

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* 30 points = non-conservative
30 points = indifferent (no political persuasion)
30 points = conservative

Neutral statements/questions serving as filler items are marked with (*) in Appendix I.

3.4 SUBJECTS

Data were obtained from 570 subjects, as shown in Table I, of which 287 were males and 283 were females. The age of the subjects ranged from 13 - 18 years, the largest group being aged 15 - 16. For computational purposes, subjects were grouped as 13 - 14, 15 - 16, and 17 - 18. This grouping tended to correspond fairly precisely with their form levels (IV, V, VI-VII). The sample population from 4 different schools in a South Island district came from non-streamed academically mixed classes of students of various socio-economic backgrounds with no particular group or social class dominating.

TABLE I: Distribution of Subjects by SEX and AGE within each of the 4 SCHOOLS[+]

SCHOOL	SSG			RUR			SUB			SSB			TOTAL
age	13-14	15-16	17-18	13-14	15-16	17-18	13-14	15-16	17-18	13-14	15-16	17-18	
SUBJECTS													
♂ sex	-			-	15	15	15	15	15	-	30	30	
				15	15	6	15	15	7	30	30	19	287
♀		30	30	-	15	15	15	15	15		-		
	30	30	16	15	15	6	15	15	6				283
TOTAL	136			132			163			139			570

[+]SSG single-sex girls'
RUR rural
SUB suburban
SSB single-sex boys'

The secondary schools included a rural co-educational group of 132 students, a suburban co-educational group of 163, and two single-sex urban schools of 139 male and 136 female students respectively. The rural co-educational high school had a student population of over 1,000 in 1985. The school serviced the local community and surrounding farming/horticultural areas. The suburban co-educational high school of over 1,000 students comprised residents (mainly) from the local neighbourhood of state housing as well as executive-classed homes. The two single-sex high schools, located central city, were surrounded by an executive-classed neighbourhood. These two schools each had populations of just under 1,000, the lower forms in each being private tuition, with boarders comprising a portion of each school's roll.

3.5 PROCEDURE

Permission to conduct the survey was granted by the District Senior Inspector of Education (Wellington). The principal of each high school was contacted initially by letter and subsequently by telephone to arrange for an appointment to discuss the feasibility of asking students to complete the questionnaire. A copy of the questionnaire was usually perused in detail before arrangements were made. At least two forms from each age level at each school were approached (with the consent of the class teacher-in-charge) in order that approximately equal sample sizes might be obtained for later comparison.

3.5.1 Setting

This study attempted to attain some degree of external validity by using an educational setting to conduct research. Students were approached in a group setting, either in their classroom or in an assembly hall (supplied with desks). In the assembly hall setting, students' preparatory period was partially utilised. Generally, however, actual classtime was allotted from regularly scheduled English, History or Social Studies classes. The "familiar" setting for the subjects lent a studious atmosphere.

3.5.2 Distribution and Collection

The questionnaire was distributed among subjects from Forms IV - VII during late September through early October 1985. The attending teacher/counsellor made introductions, after which the author invited students to complete the questionnaire. Participation in the survey was voluntary.

The following statement was included with the instructions:

> This survey takes about 20 minutes and is part of research which will be compared with other students your own age here in New Zealand and overseas.
>
> Your comments, ideas and criticisms are welcomed. You may write between the lines or at the end of the survey if you wish.
>
> One clarification to the instructions in Section I, before you begin:
>
> > if you DISAGREE with the statement, tick '7', otherwise tick from '1' - '6', depending on how much you agree with the statement.
>
> You will be informed of the results of this survey through the College, if you are interested.

Very few questions arose from subjects during the completion of the questionnaire apart from some of the youngest age group who required some clarification of meaning of words used in Section III. Respondents found the first section of questions quick and easy to complete. In Section II, a forced-choice format imposed a more structured response mode, and together with Section III, required more knowledge of the issues. Respondents were descriptive in their replies if questions were not easily answered. Generally, these comments were constructive, i.e. positive. Written comments will be considered in the Discussion section.

Questionnaires were collected as completed. Reactions from subjects indicated that items in the questionnaire had raised considerable interest. Subjects were later debriefed and school administrators were each sent letters of appreciation for having granted permission to conduct the survey.

CHAPTER FOUR

RESULTS

4.1 INTRODUCTION

The results presented in this chapter are both qualitative and quantitative in content. In the following sections, the data analysis is explained. Responses to the questions were analysed and tested for consistent patterns by chi-square contingency tables. Paired t-tests were used to determine if there were regular trends between the ordered multi-state responses. A summary of the main findings from the questionnaire is followed by comparisons with other research findings in New Zealand and Australia, as well as in the northern hemisphere.

4.2 DATA ANALYSIS

The BMDP (1983) statistical software computer package was used to analyse the data generated from the questionnaire. Firstly, a frequency count for every item in the questionnaire was obtained. Responses to questions were analysed in terms of age, sex and school and consistent patterns within or association between responses were tested by correlating select variables with each other using chi-square tests, with Yates' correlation where applicable.* Paired t-tests were used on appropriately scaled variables to test for significant differences. Finally, because of the possibility of inter-correlations between sex and school (approximately half of the sample

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* Factor analysis was not employed due to the nature of the questionnaire construction, i.e. varying response category coding.

comprised single-sex schools), stepwise logistic regressions were used to select what were taken to be the most important predictor variables, determining the subject's responses to questions. The p-value-to-enter was set at 0.05, the p-value-to-remove was set at 0.05, and the tolerance for the multiple regression analyses was set at 0.0001.

Graphs and histograms were produced by the Plot 79 package for the Burroughs B6900 machine, using the Hewlett-Packard plotter.

4.3 RESPONSE RATE

Of the 629 questionnaires completed, 59 were incomplete, i.e. either subjects missed a page or had not completed demographic details. A response rate of better than 90% for the survey was still maintained. Only 10 subjects (less than 2%) responded in what will be classified as a "negative" or destructive fashion. This type of response indicated that the survey was a waste of time or that the subject was apathetic about the issues. Generally, however, there was an active participation, judging by the variety of responses and descriptive entries. A total of 381 respondents made further comments on their questionnaire, drew relevant pictorial images or sought further information from the author by leaving their name and address on the final page. Lower forms were more inquiring, partially due to the political terminology in Section III, but mostly interested to share with others their own impressions.

Of the nearly 67% of respondents who made some

additional written reaction or comment, over 65% were classified as what will be termed "positive" or constructive. "Positive" examples include:

"Thanks for asking us what we think."

"I think we should be told more about nuclear issues and what life would be like afterwards, so we can help avoid it."

"Nuclear war is stupid. It would ruin the world and everything growing."

"Nuclear war really sucks. Reagan is a war monger."

"NO one can win a nuclear war!" (Over 28% (107) of respondents who made comments included this opinion or a variation of it.)

France was cited as New Zealand's enemy by 16.5% (63).

U.S.A. was cited as New Zealand's enemy by 1.8% (7).

U.S.S.R. was cited as New Zealand's enemy by 0.5% (2).

No other country was specifically mentioned for this question.

"Negative" examples by respondents include:

"Thanks for wasting my free period! Now I won't have time to finish my assignment."

"Who cares?"

"I hate surveys!"

In Section II of the questionnaire, some subjects found the forced-choice format was too limiting. With some of the questions in this section, respondents inserted their own columns or explained in writing why the question was difficult to answer. In the most notable instance (Q.26, "Would you want to be a survivor of a nuclear war?") about 4% (24) could not give a yes/no answer to that question. Generally, their answers were lengthy, based on the complexity of their thinking. Other difficult questions and the percentages who did not limit themselves

to a forced choice response were:

Q.7	"Do you think non-nuclear warfare can ever be justified?"	3%
Q.9	"Do you think nuclear weapons are an effective deterrent to nuclear war?"	4%
Q.11	"Would you let the prospects of a nuclear war affect your plans to ever have children?"	2%
Q.14	"Do you feel more secure without nuclear-powered ship visits?"	2%
Q.17	"Does New Zealand itself have any foreign enemies?"	3%

4.4 GENERAL FINDINGS

The results from this survey of adolescents indicate that the respondents are concerned about nuclear threat issues, if lacking detailed knowledge about them. While two-thirds of the sample express pessimism about the future for humanity and nearly half believe that nuclear war is likely in the future, on a more personal level there is optimism for their own futures. Written comments by many of the respondents indicate that there is a sense of social efficacy (rather than feelings of helplessness or hopelessness). Respondents appear to be living on two levels of thought; one where they are disillusioned with events in the wider international realm and another where they express plans indicative of future personal direction, with positive prospects.

4.5 SURVEY RESULTS INCLUDING SEX AND AGE DIFFERENCES

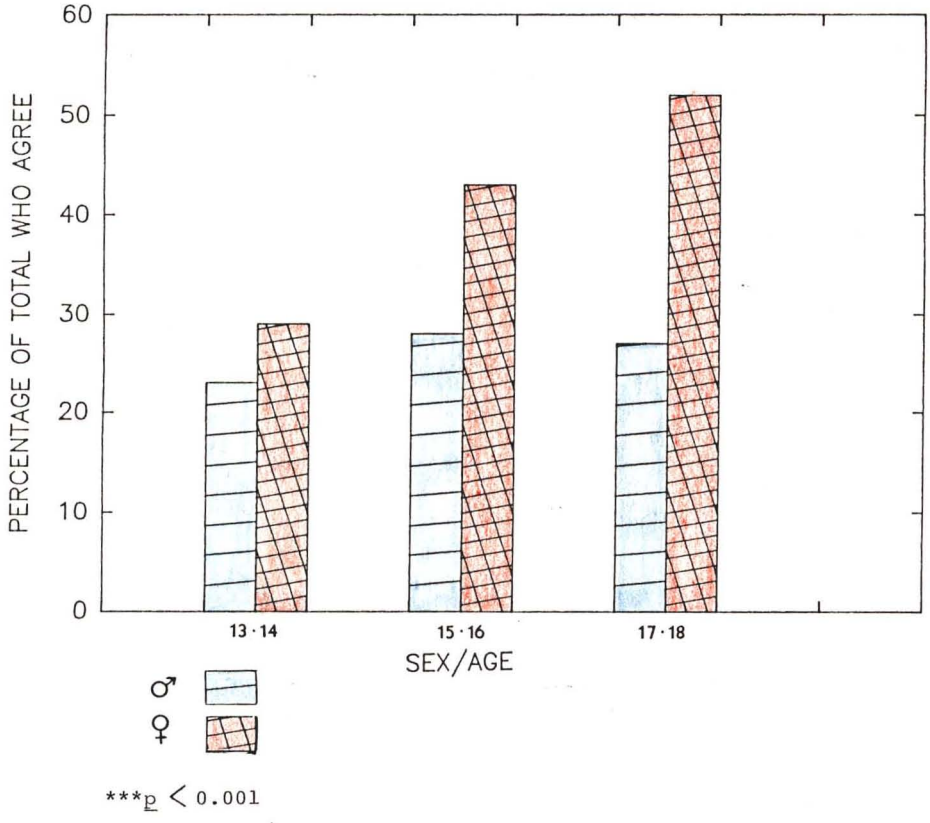
The majority of respondents clearly believe that their own personal lives will be better in 15 years; however, less are so sure about whether their lives will

be better than their parents' lives have been. There is a significant trend of pessimism when the subjects are asked to think about their own life in the future - compared with life in New Zealand [$t(569\ df) = 8.6$, $p < 0.001$] - compared with life on earth [$t(569\ df) = 8.2$, $p < 0.001$]. A paired t-test indicates that when subjects are asked to think about the quality of life on earth in 15 years, they were least optimistic about their forecast. There was a consistent effect in terms of these t-test combinations that subjects were marginally more optimistic about what life will be like in their own country in 15 years, but most subjects think positively about their own life in 15 years. Nearly 83% are opportunistic in thinking that the prospects of a nuclear war would not affect their career plans.

Significant differences arose between males (26%) and females (44%) as to what affect the prospects of a nuclear war would have on whether they would have children [$X^2(1\ df) = 19.94$, $p < 0.001$]. This concern increased with age as shown in Figure I. Nearly 40% of the 17-18 year olds compared with only about 25% of the 13-14 year olds believed that they would be affected [$X^2(2\ df) = 7.9$, $p < 0.05$]. Generally, more females (47%) than males (32%) thought that their own lives would *not* be any better than currently [$X^2(3\ df) = 19.64$, $p < 0.001$] and that their parents' lives have been better than they can expect theirs to be [females: 38%, males: 23%; $X^2(3\ df) = 19.64$, $p < 0.001$].

FIG 1: SEX/AGE DISTRIBUTION OF RESPONDENTS TO QUESTION ***

"Would you let the prospects of nuclear war affect your plans to ever have children?"



***$p < 0.001$

Ninety-six per cent of respondents thought that humans clearly cause environmental damage which is irreversible and only 3% believed that nuclear testing in the Pacific is harmless. Over 60% firmly believed that aggression and violence are innately pre-determined in the human species. This might account for the subjects who did not believe that individual people, social groups or countries could help to prevent a nuclear war. In fact, nearly 10% thought that there was nothing at all that a small country like New Zealand could do to help prevent a nuclear war, compared with significantly more (over 15%) who thought that individual people had no influence [$t(569\ df) = 8.41$, $p < 0.001$]. Some of those respondents who believed that individuals may have

influence qualified their answer by stating that such people would have to be superpower leaders - not just "ordinary" people. Small groups of people (like peace groups) gained significantly more support than individuals for being able to help prevent nuclear war [$t(569\ df) = 9.59$, $p < 0.001$]. Only about 8% had no confidence in what influence small groups of people might have towards achieving peace.

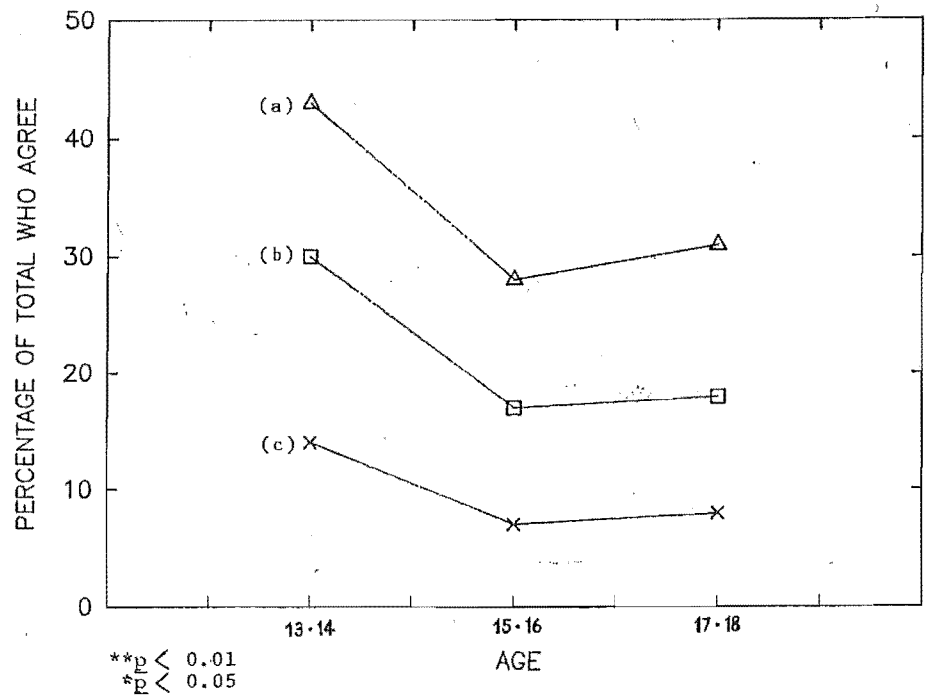
With nearly half of the sample believing that nuclear war is likely and about three-quarters of the sample strongly agreeing that any future world war would be nuclear, the data presented thus far may indicate pessimism. In fact, females do consistently hold more pessimistic views on most of the above-mentioned issues, excepting where life on earth in the future is concerned. Females had a slightly more optimistic viewpoint than their male counterparts on this issue [$X^2(3\ df) = 9.49$, $p < 0.05$]. Females were also not so ready to accept that human beings are innately pre-determined to violence and agression, while males more strongly believed that these characteristics are innately human [$X^2(3\ df) = 23.72$, $p < 0.001$]. However, fewer females than males expected peace and co-operation between countries in the future [$X^2(1\ df) = 9.86$, $p < 0.01$] and most females do not envisage less conflict between countries in the future [$X^2(1\ df) = 6.71$, $p < 0.01$]. Nearly 30% of females, as opposed to less than 18% of males, claimed to have dreams or nightmares about nuclear weapons or war [$X^2(1\ df) = 9.31$, $p < 0.01$].

Thirteen and 14 year olds were twice as optimistic

as older subjects about future peace [X^2(2 df) = 9.61, $p < 0.01$], and considerably more of them agreed that there would be less conflict in the future [X^2(2 df) = 9.94, $p < 0.01$]. The 13-14 year olds were also the most likely to believe that nuclear weapons were effective deterrents [X^2(2 df) = 9.34, $p < 0.01$] and that nuclear weapons could be used on a limited basis [X^2(2 df) = 6.35, $p < 0.05$]. There were no sex differences regarding this latter item or future peace prospects. The 15-16 year olds were the most anti-nuclear weapons in their replies, and also the least optimistic about conflict reduction in the future [X^2(2 df) = 9.94, $p < 0.01$] as shown in Figure II. One female wrote that she wanted to survive in order to help build a better world "after all the destruction and chaos" - an optimistic (?) approach to a very pessimistic forecast.

FIG II: AGE DISTRIBUTION OF NUCLEAR CONFLICT QUESTIONS

△ (a) Do you think nuclear weapons are an effective deterrent to nuclear war?**
□ (b) Do you think that there will be less conflict between countries in the future?**
× (c) Is it desirable to have small-scale nuclear weapons that a country can use on a limited basis?*

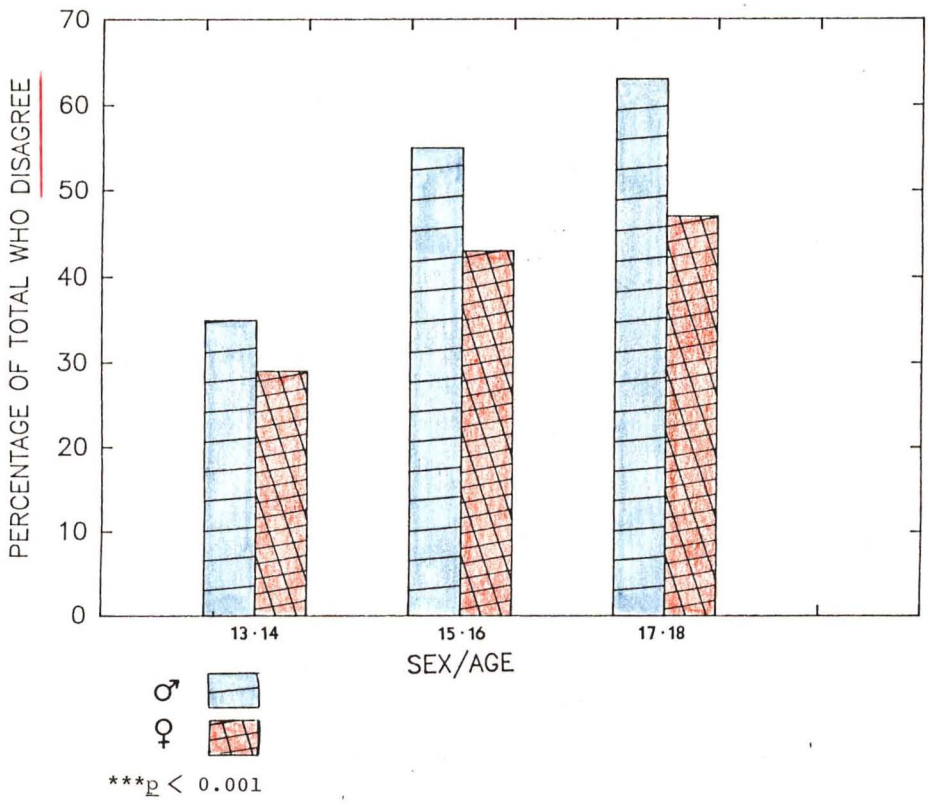


**$p < 0.01$
*$p < 0.05$

Overall, just under half of the respondents believed that New Zealand civil defence would be ill-prepared for nuclear war in Australia and New Zealand. Nevertheless, awareness of New Zealand's lack of preparedness increased with age [X^2(6 df) = 25.57, $p < 0.001$]; and males of all ages were more knowledgeable about civil defence limitations [X^2(5 df) = 27.21, $p < 0.001$], as shown in Figure III. Some 4% of respondents thought that nuclear fallout information was on the back of their telephone book.

FIG III: SEX/AGE DISTRIBUTION OF RESPONDENTS WHO DISAGREE WITH STATEMENT ***

"New Zealand's civil defence is prepared in event of nuclear war in Australia/N.Z."



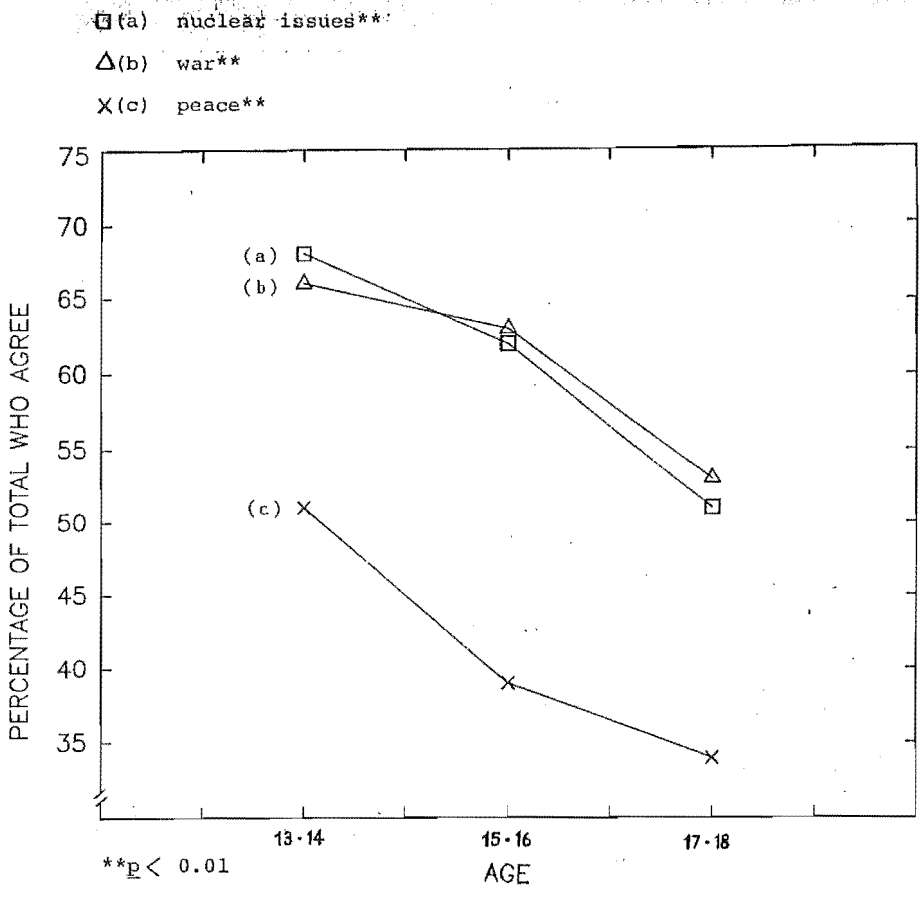
***$p < 0.001$

Two-thirds of the sample agreed very strongly that it would make very much difference to them if they could know that there would never be a nuclear war. The 17-18 year old males were the most indifferent to this question. More than a fifth of these males said that it would make no difference at all [X^2(5 df) = 22.15, $p < 0.001$].

Knowledge about nuclear issues was fairly dispersed in the sample. It would be important to mention, however, that respondents readily indicated that they had not been told enough about nuclear policies and issues which they believed would directly involve them and their future. Seventy-five per cent of the sample desired to know more about the issues raised in the survey.

All but 5 respondents out of the sample of 570 claimed to have had an awareness of nuclear issues, although less than 60% had studied about them in school, excepting the 77% of 13-14 year old males who said that they had [X^2(5 df) = 13.13, $p < 0.05$]. Slightly more of the sample claimed to have studied about war, but this still leaves one-third who said that they had not studied about war in school. Less than 40% had studied about peace. The older subjects were less likely than the younger ones to have studied about war [X^2(2 df) = 10.45, $p < 0.01$], peace [X^2(2 df) = 10.03, $p < 0.01$] or nuclear issues [X^2(2 df) = 10.75, $p < 0.01$], as shown in Figure IV. In spite of their limited knowledge of the issues, over 85% of the 13-14 year olds were receptive to and interested in learning more about nuclear issues. The comments of this age group were the most colourful and lacked the pessimism of older aged subjects.

FIG IV: AGE DISTRIBUTION OF SUBJECTS STUDIED IN SCHOOL



Although 26% knew all of the countries which have their own nuclear weapons and 79% could indicate which had used them on a population of another country, only about 5% of respondents answered both of these questions correctly. From Table II it can be seen that significantly more males than females got the two questions correct [X^2(1 df) = 6.69, $p < 0.01$]. However, this is not to discount those who considered France to have "used" nuclear weapons in the Pacific and Britain in Australia. Both of these nuclear nations have subjected populations in this part of the world to nuclear testing. It is worth noting here that nearly 100% of the sample knew that the U.S.A. and the U.S.S.R. have nuclear weapons, over 90% knew that France has, over 75% were aware that Britain is a nuclear nation, and over half of the sample included

China. Israel, a country most recently disclosed as "unofficially" having their own nuclear weapons, was mentioned by 21%.

TABLE II: Sex Distribution of Correct Answers[+] to Knowledge Questions**

	RIGHT		WRONG		TOTAL	
	N	%	N	%	N	%
♂	(22)	4	(265)	47	(287)	51
♀	(8)	> 1	(275)	48	(283)	49
TOTAL	(30)		(540)		(570)	

[+]Answers to 2 questions:
(a) Which countries have their own nuclear weapons? (and)
(b) Which have dropped nuclear weapons on the population of another country?

** $p < 0.01$

Tests for consistent patterns within responses of each subject showed that the U.S.S.R. had an edge over the U.S.A. with more than 8% of respondents believing that the U.S.S.R. could win a nuclear war instead of the U.S.A., compared with only about 3% who believed that the U.S.A. could win instead of the U.S.S.R. [X^2(1 df) = 239.33, $p < 0.001$]. These beliefs decreased with age [X^2(6 df) = 21.76, $p < 0.01$]. Nearly 75% claimed that neither superpower could win, and some commented that "win" was an irrational concept when considering this issue, as mentioned previously. Nearly 26% believed that the U.S.S.R. rather than the U.S.A. (19%) was prepared to reduce arms [X^2(1 df) = 17.17, $p < 0.001$]. Almost 43% of respondents believed that the U.S.A. was more likely than the U.S.S.R. to launch a first-strike attack, but

there were not significant differences by age [X^2(2 df) = 2.11, $p > 0.1$] or by sex [X^2(1 df) = 2.88, $p > 0.05$].

Below are two-way frequency tables indicating the associations between select questions. Apparently, 43% of respondents not only expect a nuclear war but also accept (in varying degrees) their own thinking about this [X^2(1 df) = 8.32, $p < 0.01$] as shown in Table III. Thirty-five per cent believed that there will be a nuclear war and, in addition, do *not* want to survive it [X^2(1 df) = 0.16, $p > 0.5$]. See Table IV. This accounts for the majority (75%) of those respondents who believe that there is going to be a nuclear war.

TABLE III: Two-way Frequency Table of Variables**
"Easy to accept own expectations"

"Unlikelihood of nuclear war"	yes N	yes %	no N	no %	N
yes	(289)	51	(11)	2	(300)
no	(244)	43	(26)	5	(270)

570 = TOTAL

** $p < 0.01$

TABLE IV: Two-way Frequency Table of Variables#
"Desire to be a survivor of a nuclear war"

"Unlikelihood of nuclear war"	yes N	yes %	no N	no %	N
yes	(70)	13	(219)	40	(289)
no	(66)	12	(191)	35	(257)

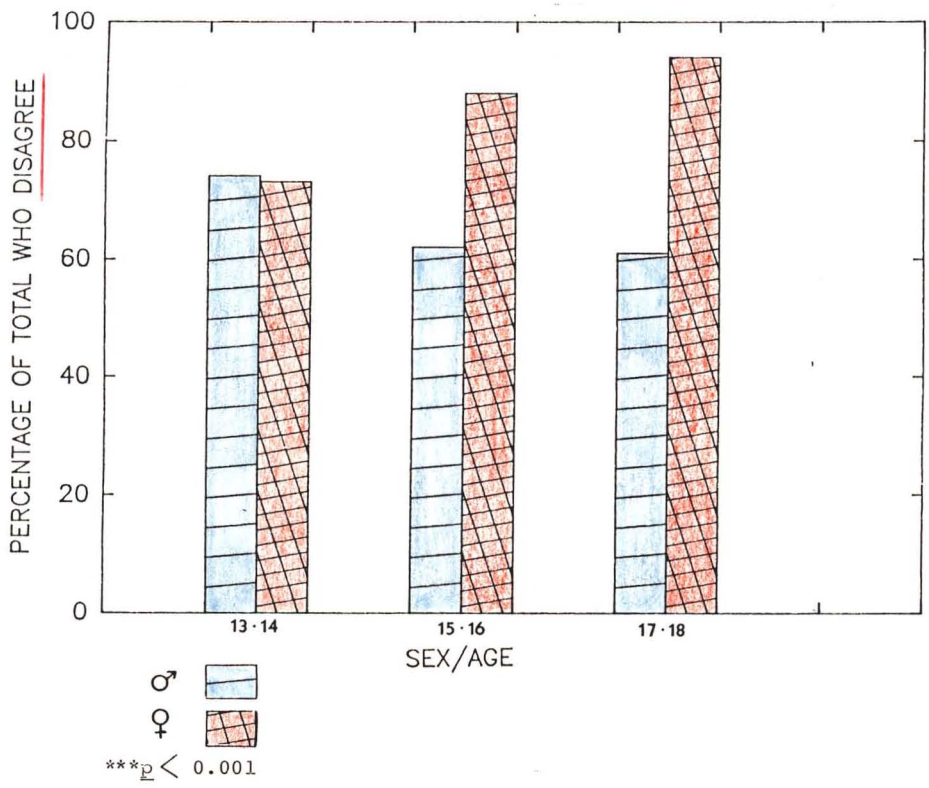
546 = TOTAL

$p > 0.05$ (NS)

In Figure V, significantly more females (86%) than males (65%) said that they did *not* want to survive if there was a nuclear war [X^2(1 df) = 32.39, $p < 0.001$]; however, this difference does not appear until age 15-16 [X^2(5 df) = 46.94, $p < 0.001$].

FIG V:SEX/AGE DISTRIBUTION OF RESPONDENTS WHO DISAGREE WITH QUESTION ***

"Would you want to be a survivor of a nuclear war?"



Less than 3% of the sample did *not* want to know more about nuclear issues while at the same time they could justify nuclear war [X^2(1 df) = 0.05, $p > 0.5$] and nuclear weapons on a limited basis [X^2(1 df) = 1.5, $p > 0.1$], and believed that nuclear war was predicted in the Bible [X^2(1 df) = 7.56, $p < 0.01$]. See Tables V, VI, and VII. Forty-six per cent of the sample believed that New Zealand had enemies. France was mentioned most often here, followed by the U.S.A. and the U.S.S.R.

Reagan appeared by name as an enemy without reluctance, whereas Mitterrand and Gorbachev never appeared by name.

TABLE V: Two-way Frequency Table of Variables[#] "Justification for nuclear war"

"Desire to know more about nuclear issues"

	yes		no		
	N	%	N	%	N
yes	(52)	9	(370)	67	(422)
no	(18)	3	(114)	21	(129)

551 = TOTAL

[#]$p > 0.05$ (NS)

TABLE VI: Two-way Frequency Table of Variables[#] "Desirability of nuclear weapons on a limited basis"

"Desire to know more about nuclear issues"

	yes		no		
	N	%	N	%	N
yes	(36)	7	(385)	70	(421)
no	(16)	3	(116)	21	(132)

553 = TOTAL

[#]$p > 0.05$ (NS)

TABLE VII: Two-way Frequency Table of Variables** "the Bible predicts nuclear war"

"Justification for nuclear war"

	yes		no		
	N	%	N	%	N
yes	(14)	3	(46)	9	(60)
no	(180)	37	(250)	51	(430)

490 = TOTAL

**$p < 0.01$

Respondents indicated more with increasing age that the Bible predicts nuclear war [X^2(2 df) = 6.56, $p < 0.05$] - a situation which may account for older subjects who were only half as likely to believe that peace and co-operation would happen in their lifetime [X^2(2 df) = 9.61, $p < 0.01$].

Although 68% felt positively towards A.N.Z.U.S. (Australia/New Zealand/U.S.A. Treaty Alliance), approval of the government's ban on nuclear powered and armed ships was supported by over 66% of the sample [X^2(1 df) = 127.68, $p < 0.001$]. There was significantly higher female than male approval on this latter issue of nuclear ship bans [X^2(1 df) = 21.79, $p < 0.001$], with only about 13% of the sample disagreeing with it. An additional 19% of the sample would permit nuclear powered ships in port, if unarmed. See Table VIII. More females (of all ages) felt more secure without nuclear ship visits than males [X^2(5 df) = 14.34, $p < 0.05$]. Nevertheless, this sense of security decreased with age as shown in Figure VI.

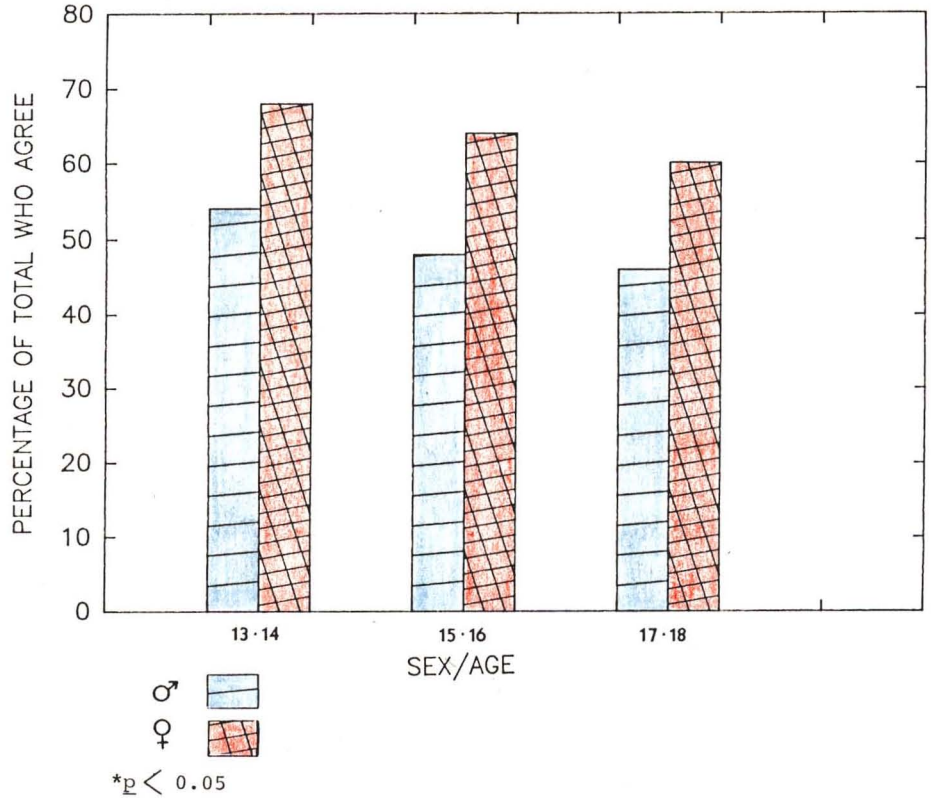
TABLE VIII: Two-way Frequency Table of Variables***
"Approval on ban of nuclear-*armed* ships"

"Approval on ban of nuclear-*powered* ships"	yes N	yes %	no N	no %	N
yes	(366)	66	(11)	2	(377)
no	(107)	19	(69)	13	(176)
					553 = TOTAL

***p 0.001

FIG VI:SEX/AGE DISTRIBUTION OF RESPONDENTS TO QUESTION *

"Do you feel more secure without nuclear ships visiting N.Z. ports?"

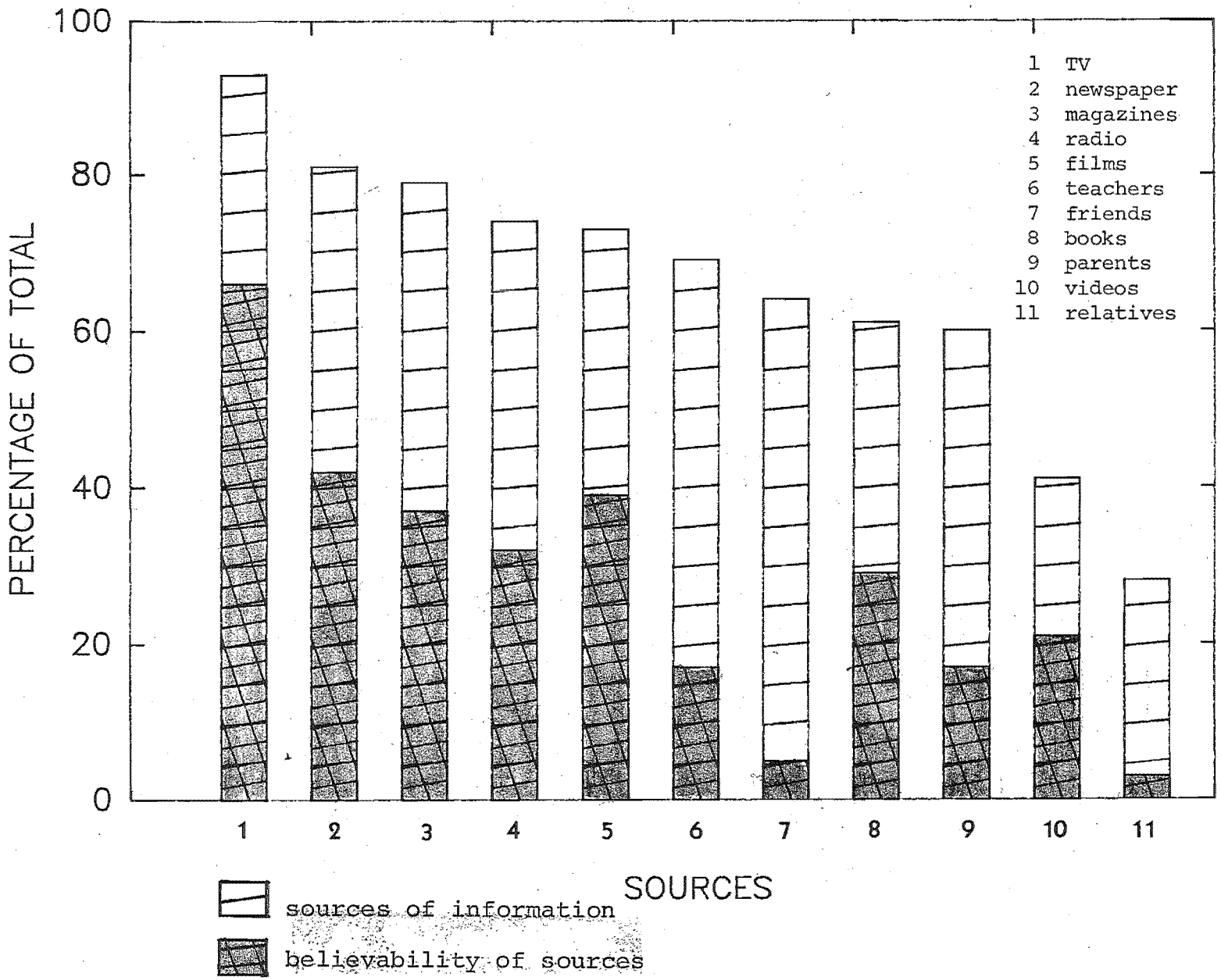


*$p < 0.05$

Thirteen per cent of respondents were not at all hopeful about their expectations of the future and over 66% proclaimed to be pessimistic about the future. There was a general acceptance (73%) of their own expectations in spite of these beliefs.

Television was the most frequently cited source and most believable source responsible for informing subjects about nuclear issues. In Figure VII is a breakdown of information sources and whether these same sources were considered to be believable. It can be seen that teachers rate higher than parents by about 10%, but both teachers and parents rate very low on credibility, compared with media sources.

FIG VII: SOURCES OF INFORMATION AND BELIEVABILITY



4.6 THE CONSERVATIVE SCALE

In Section III of the questionnaire, subjects were asked to rate the items listed according to whether they had a positive, negative or indifferent reaction. The items consisted of politically-loaded terms and phrases which had been rated as such by independent assessors (see 3.3.2 (c)). Table IX shows that the majority (52%) of the subjects were found to be indifferent, according to the scale. However, a large proportion (nearly 43%) were non-conservative in their rating of political items. Only marginally more than 5% of the total sample rated items conservatively; that is to say, they indicated a positive preference for politically conservative items.

TABLE IX: Conservative Scale Ratings of Scorers

	'LEFT'		'MIDD'		'RIGHT'+		TOTAL	
	N	%	N	%	N	%	N	%
SCORERS	(244)	43	(295)	52	(31)	5	(570)	100

+'LEFT' = non-conservative
'MIDD' = indifferent/no opinion
'RIGHT' = conservative

This section of the questionnaire served as a check for agreement response-bias. When conservative scoring was correlated with another item in the questionnaire which had been rated similarly by independent assessors, respondents were found to be answering the items fairly consistently, an indication that acquiescence had not occurred. In Table X, over 70% of the respondents whose political point of view was conservative (i.e. 'RIGHT') answered consistently on another conservative item

[X^2(6 df) = 50.86, $p < 0.001$].

TABLE X: Two-way Frequency Table of Variables***

"Approval on ban of nuclear-powered ships"	'LEFT' N	'LEFT' %	'MIDD' N	'MIDD' %	'RIGHT'+ N	'RIGHT'+ %	N
yes	(195)	80	(174)	59	(9)	29	378
no	(45)	18	(111)	38	(22)	71	178
?	(4)	2	(9)	3	-	-	13
TOTAL	(244)	100	(294)	100	(31)	100	569

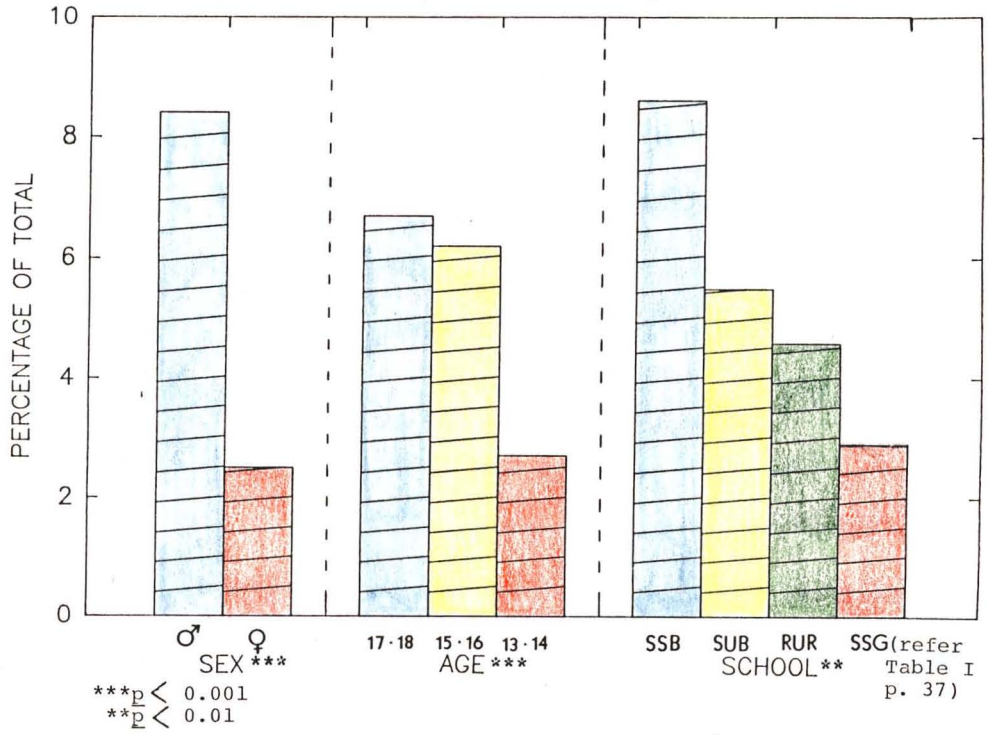
+'LEFT' = non-conservative
'MIDD' = indifferent/no opinion
'RIGHT' = conservative

***$p < 0.001$

Figure VIII compares respondents ratings by sex, age and school. Significant differences were found in the distribution of conservative respondents. Males were more than 3 times as likely as females to have scored conservatively [X^2(2 df) = 18.32, $p < 0.001$]; and the boys' college (the only school involving compulsory military training) rated significantly higher with conservative scorers [X^2(6 df) = 22.31, $p < 0.01$] compared with the other schools. It must be remembered, however, that the sample size was small, thus diminishing the significance of these results.

FIG VIII: DISTRIBUTION OF 31 CONSERVATIVE RESPONDENTS BY SEX/AGE/SCHOOL

in PERCENTAGES for each respective CATEGORY



4.7 COMPARATIVE STUDIES - NEW ZEALAND AND AUSTRALIA

It was intended that research by Shallcrass (1968), Shallcrass and Gavriel (1982) and Gray and Valentine (1984) should serve as models for this study since they had conducted similar research in New Zealand recently. In many respects, the New Zealand research findings are similar to each other. However, in other areas, findings are quite different.

The research samples by Shallcrass came from Wellington, were longitudinal in scope and were administered to sixth formers only. These factors differentiate his results from this particular study. Gray and Valentine's subjects came from the Taranaki region and because their sample included forms V, VI and VII, their results may be more directly comparable. In 1968, when Wellington sixth formers were asked by Shallcrass about

the likelihood of nuclear war, 38% confirmed it compared with 65% in 1982. This study obtained results half-way between these two figures. Compared with Gray and Valentine's 23%, however, this study's results were high.

Looking at the (a) likelihood of nuclear war impacting on New Zealand (if conflict originates in the northern hemisphere) and (b) certainty about a third world war being nuclear, there was considerable agreement with the Taranaki sample. The majority of New Zealand subjects believed both of these statements to be true.

The Taranaki research said that New Zealand was at a greater disadvantage to help prevent a nuclear war than this survey indicated, however. Their sample was more than 3 times as likely to believe that a smaller country like New Zealand could not help. Over half of their sample also placed no confidence in individual people having any influence. Similarly, Shallcrass reported increased diffidence about how effective one person could be, from 21% in 1968 to 40% in 1982 - much higher results than this sample's 15%. Whereas the majority of the Wellington sample were still cautiously optimistic, the Taranaki survey showed a pessimistic outlook with few of the sample believing that they had any power to prevent what they were forecasting.* While results are open to some interpretation, as Shallcrass concedes, this survey tends to lean towards his findings thus far.

The media was rated as the most important information source for seeing, hearing or reading about nuclear

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* The Taranaki sample had a female/male ratio of 2:1. This may partially explain why the results were so pessimistic (as females tend to hold more pessimistic views).

issues, according to New Zealand samples. Television was the most widely cited influence. Gray and Valentine did not give teachers or parents a mention so it is assumed that they were *not* highly regarded, as was the case in this sample. Only 33% of their sample claimed to have studied about nuclear issues in school, compared with nearly double that in this study. The majority of their subjects thought that they had not been told enough and this study confirms that they desired to know more about nuclear issues.

Both the Taranaki and Wellington samples largely believed that conventional warfare could be justified, compared with this study's 32%. Half of Gray and Valentine's sample and 46% of Shallcrass' sixth formers could justify it (although his figures were up from 36% in 1968). On the justification for nuclear warfare, 21% (1982) up from 15% (1968) of the Wellington group, 8% of the Taranaki sample and 12% of this study agreed that it could be. The Taranaki sample and this study showed that significantly more males than females agreed with the justification of war in any form.

This survey's sample and Taranaki's group were found to lack knowledge of nuclear issues when asked which countries out of a list have nuclear weapons. The U.S.A. and the U.S.S.R. were known to have them by most of the Taranaki sample (97% and 98% respectively) and by this study (over 99%). Knowledge regarding other countries' possession was much less accurate. Only 70% of the Taranaki sample knew that France had nuclear weapons compared with nearly 92% of this study.

Gray and Valentine claimed that females tended to know less about nuclear-related matters and this was confirmed by this study. Likewise, Taranaki females were more pessimistic than their male counterparts. Although this study confirmed the same, as did Shallcrass' results, he elaborated that even though the female profile may be more pessimistic, it may also be one of realism.

Shallcrass and Gavriel remarked that generally there was overwhelming enthusiasm for peace and strong support for those general proposals which were expressions of hope. Gray and Valentine indicated that their subjects were pessimistic about the future of the world and few of them believed that they had any power to prevent destruction. Nevertheless, half of their sample said that their knowledge of nuclear war did not affect their attitude to life at all. These attitudes (which might be labelled anywhere from helpless-to-apathy-to-denial) generally were not reflective of the results obtained from this survey. On the contrary, more positive and constructive replies pervaded this survey's general outlook, in line with Shallcrass' findings.

A Wellington study by Taylor and others (in press) related findings which suggest a sense of social efficacy as evidenced in this New Zealand study. Apparently, students who said they worried the most frequently about nuclear warfare were *also* those who felt more able to do something to prevent such a war. Their respondents were not resigned to inactivity and from qualitative comments in this study, similar findings were apparent. Rather

than feelings of helplessness or hopelessness, the Wellington study and this study revealed subjects who were despairing but not despondent. Only 25% of their respondents thought that nuclear war was likely to occur. Considering that nearly half of this sample believed similarly, the sense of efficacy may be even more pronounced. A comparable large majority could not justify nuclear warfare.

Turning to recent research in Australia, a Sydney study by Mann and Digby (1984) showed results similar to New Zealand studies and in agreement with some northern hemisphere research - specifically, Escalona (1965, 1982) whose sample came from a similar age group. From the survey of Sydney children, 64% compared with this study's 47% believed that nuclear war was likely and 77% that there would be another world war. Over 46% had essentially pessimistic expectations and perceived the future as threatening. Over 66% of this study expressed pessimism about the future when asked directly.

McMurray and Prior (1985) conducted research in Melbourne schools where it was agreed by 47% of their respondents that the nuclear issue was the most important social problem today. Fifty per cent believed that nuclear war was likely to occur in their lifetime, comparable with this New Zealand study's findings. Eighty-four per cent of the Melbourne sample claimed to be optimistic about the future, contrary to the Sydney sample and a direct reversal of findings from this New Zealand study. In other items, however, there were similarities with this study. Melbourne subjects

attributed significantly more responsibility to others than to themselves (as confirmed by this study). They found that the way in which a question is asked is important and this New Zealand study confirmed the same, e.g. Section I, 7 and 20. They found that subjects who had studied peace in school had more efficacious expectations and attributions of responsibility. This New Zealand study partially confirmed this in that over one-third of the 13-14 year olds (who claimed to have had the most input in school regarding peace and nuclear issues) were most likely to also believe that peace and co-operation would happen between countries in their lifetime. This attitude was significantly higher (double, in fact) than the rest of the sample who claimed not to have had peace or nuclear issues as often in school. There were not significant differences between age groups regarding whether an individual might be as effective as either a group or a country in preventing nuclear war. This might have lent further support to McMurray and Prior's findings. In any case, 60% of their sample approved of the New Zealand nuclear ship ban - very comparable with this survey's 66%.

Returning to Mann and Digby's results, only 20-29% gave personal sources (parents, teachers, peers, etc.) as their means of finding out about nuclear issues. The mass media (television and radio) accounted for 51-77% of their information source and only 7% from newspapers and magazines. Remembering that this sample was comprised of a younger age group, the similarities with this New Zealand study were nevertheless noticeable for their lack

of emphasis on parents or teachers. The Sydney study was qualitative as well as quantitative in content. Comments which resulted from open-ended questions indicated that there was a reasonable level of knowledge about the destructive powers of nuclear weapons, that Australia could expect to be implicated in any future world war, and that devastation and destruction would be the scenario of a nuclear war. The respondents commented that a nuclear war could not be "won". Similar comments and attitudes reflect this New Zealand study. The Sydney sample clearly was against the assumptions which McMurray and Prior made about the possibility that Australian children were naive and feel geographically "safe". Mann and Digby's research indicated that their sample was not insulated from nuclear issues by geography, history or complacency. They felt anger as a response to a perceived threatening future. This New Zealand study had similar conclusions.

4.8 COMPARATIVE STUDIES - NORTHERN HEMISPHERE

Escalona (1962, 1963 and 1965) and Schwebel (1965) were two of the earliest comparable studies from the United States which considered the effects of nuclear issues on young people. Beardslee and Mack (1982, 1983) have more recently contributed a substantial amount of research on the impact of nuclear developments on children and adolescents. Escalona found that 70% of her sample spontaneously referred to war and peace as major concerns in 1965. Schwebel (1965) said that: 44% expected war; it would definitely make a difference knowing that there

could never be a nuclear war; and, the prospects of nuclear war would affect their career plans and hopes for having a family. Details of percentages were not available, but these were put forward as majority opinions. Schwebel and Schwebel (1982) furthered these results with evidence from interviews that subjects were very anxious, scared, powerless, bitter, mad and resentful. Their sample did not believe that they could survive a nuclear war. Younger subjects were more naive and fearful than older ones. Denial mechanisms served to abate the fears of some who were characterised as narcissistic, self-centred and apathetic. The qualitative nature of these results make direct comparative analysis very difficult. However, it can be said that a measure of each of the attitudes as outlined by Escalona and Schwebel did apply to this survey. The question remains as to what extent these attitudes reflect this New Zealand sample.

Adams (1963) and Wade (1962) concluded that fear or anxiety decreased with age and that attitudes and opinions changed with age. Croake and Knox (1973) reported that fear was associated more with younger than older subjects, and more with females and lower socio-economic status than with males and upper socio-economic status. The most frequently mentioned fears were political. This New Zealand survey agreed that younger subjects were more naive than older ones, and that females were more pessimistic than males - but fear and/or anxiety and socio-economic status were not analysed.

The Beardslee and Mack (1982, 1983) research was more quantitative and thus more easily comparable.

Longitudinal research indicated that there has been increasing expectation that annihilation will occur within one's lifetime, with the majority believing that nuclear war was at least possible, with more indicating that it was likely, but in the distant future. The majority of their sample thought that civil defence preparations were worthwhile even though, in one survey, only 4% believed that their city could survive a nuclear attack. It may be that their subjects were more knowledgeable about the effects of a nuclear exchange than this New Zealand sample (who agreed in varying degrees that this country could be prepared for nuclear war). On the other hand, the United States sample showed unsophistication to suggest that bomb/fallout shelters would be a solution. This was not an option for the New Zealand sample, nor a consideration. The Beardslee and Mack research conveyed a deeply disturbed and despairingly threatened group of young people who had a general unquiet or uneasiness about the future and about the present nature of nuclear weapons. Similar comments and attitudes were reflected by some subjects in this New Zealand study, but with much more emphasis on personal efficacy and hope than being disturbed or despairing. Beardslee and Mack stated that their subjects live on two levels: one where they think there will be no future and another where they are making plans as if there will be. This applied to this New Zealand sample.

The news media, particularly television, was cited as the main source of information by subjects in Beardslee

and Mack's survey. The classroom ranked second, indicating a difference from New Zealand studies. Over 50% thought nuclear weapons were important for national security, compared with less than a third of this survey.

More than half of their sample let nuclear developments affect their thoughts about marriage and their plans for the future. Although it was not directly comparable, just over a third of the New Zealand sample would let the prospects affect their plans to have children. At all ages, Beardslee and Mack found females less likely than males to believe that a limited-scale nuclear exchange was possible without escalating. There were no sex differences in the New Zealand study; however, the 91% who believed that a limited exchange was not possible were much higher than Beardslee and Mack's results of 40-50%.

Beardslee and Mack indicated that there was a particular uncertainty and fear about nuclear war and the possibilities of survival. Ninety per cent in one survey thought that they would not survive. This was in keeping with the general mood of the despairing research from the United States, a situation which did not have the same foundation in this New Zealand study.

Their research did highlight a lack of knowledge which pervades most adolescent studies. Mack (1983) found that 30% of high school students did not know which country had used nuclear weapons in war. This study's 21% who did not know, was only marginally better.

Chivian, Mack, together with Doctor, Goldenring and others (1985) researched a Soviet group of adolescents to be compared with an age-matched Californian sample.

The results suggested that with Soviet adolescents, there was a general optimism expressed by these Soviet respondents that was unfounded in other research. The Soviet sample were of the opinion that there would *not* be a nuclear war, even though nuclear war was their greatest concern and 99% regarded the prospects of such an event as very disturbing. Goldenring and Doctor found in their Californian sample that 72% regarded the prospects of nuclear war as very disturbing, with over 58% fearing it, and 42% believing that it would probably occur. This compares with the New Zealand sample's 47%. Soviet subjects were fairly unanimously convinced (more knowledgeable?) that civil defence measures were a useless undertaking; but they were much more positive about preventing nuclear war in the first place (three-quarters compared with just over a quarter of the Californian sample). Soviet subjects believed that even children could help prevent the possibilities of nuclear war ever happening. Over 70% of this New Zealand study placed greatest confidence in groups of people or countries (like New Zealand) helping to prevent nuclear war, with 53% having confidence in individual people.

Goldberg and others (1985) conducted research involving over 2,000 Ontario subjects. Nuclear war was found to be the most prominent worry for 51% and 55% who spontaneously mentioned this worry when asked, "When you think about the future, what do you most worry about?" Worry about war decreased with age, but the more frequently subjects felt fearful and anxious about nuclear war, the more likely that they *also* felt that they had

some personal influence. The sample said Canada (as a country) had more influence than an individual in being able to help prevent a nuclear war - similar findings to this New Zealand study. The majority of the sample were in favour of banning the manufacturing and testing of nuclear weapons while at the same time supported N.A.T.O. This New Zealand study found a similar parallel between majority approval of the government's anti-nuclear stance while also favouring A.N.Z.U.S.

Canadian subjects claimed to talk most about the threat of nuclear war at home, secondly with friends, and rated school as their third most likely place where the nuclear threat was discussed. From these results, it follows that parents and teachers must have rated much higher as information sources for the Canadian subjects than for the New Zealand samples. A Finnish study to follow offers some comparisons with this Canadian study as well as the New Zealand sample.

Like the Canadian study, Solantaus and his colleagues (1985) found that worry about war decreased with age, as results show from an extensive nationwide sampling in Finland. The threat of war was the most common source of fear for 81% of subjects. This may be surprising considering that Finland is a neutral country, has no nuclear weapons and no enemies, living at peace with her neighbours. In many respects, this country is similar socio-demographically to New Zealand, making cross-cultural comparisons interesting.

In opposition to this New Zealand study's results, optimism increased with age. This was in spite of

increased fears and anxieties (in Finnish females), and a general decline in hopes for peace (by both sexes). Finnish males were most fearful at age 12. Older subjects believed that individual people could have an influence in preventing nuclear war and optimism about prevention was highest among the older subjects. There were no significant age differences found in this New Zealand study relating to optimism about prevention.

War and peace had been discussed by teachers in 57% of the secondary schools and in 45% of higher secondary schools (equivalent to VI and VII forms). This compared with this New Zealand sample which showed that war, peace and nuclear issues were not considered to have been studied in school by older students as much as younger ones. With regard to justification for war, males supported the activity more readily, whereas females were much more likely to react with anxiety. This was supported by other research and although this New Zealand study did not attempt to measure anxiety, consistently more males than females found justification for war. Fear or anxiety was experienced by 37% of females and 15% of males in the Finnish study, and tended to increase with age. Thirteen per cent of Finnish females and 6% of males had nightmares. This was less than half of the New Zealand results, but was comparable by the sex difference.

Although it has been stated that hopes for peace decline with age, the Finnish study established that optimism increased. If "optimism" can be compared with the belief that there will be less conflict (and) more

peace and co-operation between countries in future, then this New Zealand study found conflicting evidence. Older Finnish subjects felt more optimistic about their ability to influence events, and although there was nothing comparable to measure in this New Zealand sample, older subjects did make qualitative comments and expressed more ideas which suggested aspects of coping and mastery.

Cooper (1965) found that justification for war in a British sample increased with age; that females were less likely to condone such conflict, yet more believed that it was likely and that they *would* survive it, even though subjective probability that one could survive generally decreased with age. The belief in hostile instinctive motivations increased with age. In this New Zealand study, there were sex differences but not age differences relating to innateness of aggression and violence. Females were less likely to believe that war was justifiable and necessary or that humans were prone to aggression and violence; but there were not significant sex differences relating to the likelihood of war. Females believed more with increasing age that it would not be desirable to survive a nuclear war, but the question was not speculatively posed, as in Cooper's survey.

A Norwegian case study by Ålvik (1968) cited that with increased age comes more utilisation of available sources of information about "peace" and "war" and that older subjects made more use of these sources than younger ones. This was confirmed by this New Zealand study if ease in completing the questionnaire is considered. The

youngest of this study's sample found some difficulty with political terms and issues. Although parents did not rate highly at all in this study, they seemed to play a greater role (at higher socio-economic levels) according to Ålvik. In the Norwegian study, the main agents for socialisation (rated before parents and other people) were newspapers, radio and television. On this item, the New Zealand study confirmed the findings.

More recently, Holmborg and Bergström (1984) presented a paper on how young Swedish adolescents think and feel concerning the nuclear threat. The sample of 41 schools concluded that 42% of respondents mentioned the fear of nuclear war as their greatest worry and that females were more pessimistic about the future than males. This compares very clearly with the results from this New Zealand study.

4.9 COMPARATIVE STUDIES - CONSERVATIVE SCALE

Comparison of these results with other research is limited by the fact that no item-by-item analysis was undertaken in this study. Furnham (1985) showed numerous sex differences in socio-political beliefs from a sample of about 300 sixth formers, but suggested that perhaps sex is not such a powerful determinant of political views as Sidanius and Ekehammar (1980) and Ekehammar and Sidanius (1982) have demonstrated from their results. In New Zealand, mean scores for conservatism based on the use of the Wilson-Patterson C-Scale (Wilson, 1973) have differed very little between males and females, but in

both sexes, scores tended to increase with age (Stacey, 1977b). Furnham and Gunter (1983) found that the best determinant of political knowledge was interest in politics. Additionally, sex and age were weakly related to political knowledge, but both in a predictable direction: males having more political knowledge than females, and with increased age comes increased knowledge. What Furnham cannot explain and finds inexplicable is why females should be less conservative on most issues and yet have *less* interest and knowledge of political affairs. In the present study, similar conclusions were reached; thus, these same questions could be raised. Males were found to be both significantly more conservative and knowledgeable of the issues than females, and conservatism increased with age.

CHAPTER FIVE

DISCUSSION

5.1 INTRODUCTION

It was the aim of this present study to ascertain whether adolescents had any formulated ideas or opinions about war, peace and nuclear issues. Many reactions have surfaced from the data, if sometimes poorly conveyed or lacking a deeper understanding. The level of knowledge varied greatly and there were differences not only between individuals, but also by sex and age. These results will be discussed with special emphasis on qualitative aspects of the data and the idiosyncrasies which relate to the New Zealand research. Further cross-cultural comparisons will be made with studies from other nations, and implications will be considered. The limitations of the study and recommendations for future research will be discussed.

5.2 INTERPRETATION OF FINDINGS WITH SEX AND AGE DIFFERENCES

The research findings will be presented in terms of (1) political beliefs and conservatism, (2) cognitive reactions, (3) emotional reactions, and (4) political knowledge and the role of education.

5.2.1 Political Beliefs and Conservatism

It may be of considerable concern that while 47% of these New Zealand adolescents think nuclear war is likely in the future, 46% also perceive New Zealand as

having enemies. Bronfenbrenner (1961) has described this enemy concept as "a mirror image" and Plous and Zimbardo (1984) characterised a similar notion in their survey report, "The Looking Glass War". The common features of the enemy concept include:

*They** are the aggressors.

Their government exploits and deludes the people.

The mass of *their* people are not really sympathetic to the regime.

They cannot be trusted.

Their policy verges on madness.

Bronfenbrenner suggested that distortions of this nature (as expressed by the "enemy" concept) have adaptive functions and are self-confirming not only for the military but for implementation of government policy. In war, it is psychologically necessary to see the enemy as thoroughly evil in order to enhance one's own self image. Erikson (1985) coined "pseudospeciation" for the historical and cultural tendency to create a false sense of unique identity in groups and thus ignoring the genetic integrity of the human species. Boulding (1984) said that the state is strengthened by sacrificing its own soldiers, not by killing the enemy, for that makes the enemy sacred. It becomes hypocratic and deeply pathological when love of country becomes hatred of enemy. Volkan (1985) warned that the only way harmful consequences of this manipulation can be avoided is by being consciously aware of the processes. Intellectual and moral strength are required to avoid the destructive

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**They* or *their* meaning the "enemy"

implications of this psychological "need for enemies".

It could be argued that New Zealand has not felt very geopolitically vulnerable, historically has not experienced extensive defeat or suffering in war, and has not been involved as a nation in international affairs compared with, say, West Germany. If Listhaug (1986) is correct, such factors can be used to account for the differences between countries' assessment of likelihood of war, willingness to fight in war, fear of war, etc. From her findings, the United States feared war very strongly, but at the same time had a high proportion of its population that were willing to defend the country. That the United States behaved differently from 13 other nations throughout Europe is not satisfactorily explained, considering the geographical vulnerability of many European countries. It might be expected that since the United States has not historically suffered extensive confrontation by foreign invasion, that there would be a greater willingness to fight - the perception of war is geographically distant. But why do people in the United States fear war so strongly if this is the case? It may be that there is a strong manipulation at play and that there is political propaganda within the American system which is built around the enemy image, enriched by comments about "an evil empire". This manipulation might also explain why so many adolescents in the United States feel hopeless and helpless. They have become paranoid through this indoctrination and not least of all by the bomb fallout shelter drills in their schools (which are as commonplace

to these young people as fire drills are to New Zealand youth).

Nevertheless, it appears from this study's results that nearly half share at least some of this paranoia. It follows that since television has been such an important source of information for young people, this media must bear some accountability.

In line with previous research (Easton and Dennis, 1969; Furnham and Gunter, 1983; Greenstein, 1969; Hess and Torney, 1967; Hyman, 1959; Stradling, 1977) this present study found that males generally had a faster rate of politicization than females. Males expressed more justification for all types of warfare and claimed that knowing about nuclear issues did not affect their life as much. Males were also three times more likely to be conservative in their views than females. Furnham (1985) cannot clearly explain why this is the case apart from interpreting why females may be *less* conservative. Females are socialized into being more compassionate, concerned and nurturant, which in turn may suggest social policies which are less conservative. Furnham indicates that the question of when and why sex differences in political attitudes occur warrants further research and longitudinal studies may provide clearer evidence.

5.2.2 Cognitive Reactions

The present data indicated that New Zealand adolescents were aware and concerned about nuclear issues. Females claimed more often than males that the knowledge of nuclear issues affected their attitudes to life and their plans to ever have children. Solantaus,

Rimpëla and Rahkonen have explained:

> The military, technological and political knowledge of war is part of the male tradition. Men react to war with activity. This builds among males an image of mastery of war, no matter how false this is in the nuclear age. This might reduce overt anxiety about war. (Males) inherit this tradition through different channels, the least important of which is not the war games played by boys and video and computer war games by the older generation.
>
> In the female tradition, on the contrary, there is no mastery of war. Women's activity during war has not been directed towards warfare, but towards preserving life on the home front. Women have also been passive objects of different social measures, like evacuation. During recent wars women have become increasingly victims of actual warfare. In the up-bringing of girls, female values of preservation of life are created anew but there is little knowledge on the special mechanisms.
>
> This difference in relation to the mastery of war by males and females could explain part of the sex difference. Pressure towards the traditional norms grows in adolescence, which contributes to the growth of sex difference after 12.
>
> (1985, pp. 147-148)

Stolte-Heiskanen (1971) has elucidated that sex differences have functioned to maintain the prevailing society and that, in order to maintain the status quo, females have been discouraged from participation in politics generally or from developing a political consciousness.

Gilligan (1983) speculated that since decisions about marriage and having children do not involve their parents' generation, young people feel they have more control over this particular issue than over career plans - a sphere that they perceive to be more directly controlled by the adult generation. In this present study, opposing results were found. In fact, twice as many subjects indicated *more* control over their career plans compared with those who felt similarly about having children. One 18 year old male, faced with a concern for the nuclear

threat, expressed the importance of pursuing his career in journalism despite subjugation: "My career is paramount to me. I can help toward preventing nuclear war through my writing." Goldberg and her associates (1985) also confirmed that students felt more efficacious about their job/career plans, compared with other future concerns. It is another matter, however, as to how naive young people were to have such perceived control.

Males were more inclined to view aggressive and violent behaviour as innate although both sexes were highly conscious of the "limits" of human nature and social change, in line with findings by Stacey (1978).

Shallcrass and Gavriel (1982) reported a dogmatic minority within their sample of sixth form students. Religious believers tended to exhibit a greater polarisation of views than was evident in the non-believers. In this present study, there was a small group (3%) who were similarly dogmatic to a greater extent than the rest of the sample. Referring to Tables V, VI and VII (p. 55), this group did *not* want to know more about nuclear issues, advocated the use of nuclear weapons, could legitimate nuclear war and also believed that war was predicted in the Bible. The subjects within this group were most likely to comment:

> I'm not worried about what's going to happen because I'm going to heaven.
>
> I know that my expectations are correct. I look forward to Jesus Christ returning to power and glory. All that is in the Bible is true and the ending of the world is prophesised in Revelations.
>
> From what I read, there is going to be a huge battle. At the time of the battle of Armageddon the Christians won't be on earth. The earth will be the devil's. Those left on earth will be the toys of the devil.

> Armageddon - the end times - prophesised in the Bible, are happening now. Wars and rumours of wars are an everyday event... The people alive now will witness the real sticky stuff of the end times.

There was also a small group who thought that there was nothing individuals, groups of people or countries like New Zealand could do to help prevent a nuclear war. This group comprised only about one-tenth of the total sample, however, which is low compared with other research findings, e.g. Gray and Valentine, 1984; Shallcrass and Gavriel, 1982; Solantaus et al., 1985. The majority believed that prevention *was* possible and many commented in support of the anti-nuclear legislation by the New Zealand government. One 16 year old female replied: "If others followed our example, some real good might actually be achieved ... instead of being apathetic." Other comments included:

> New Zealand is doing its best, but other countries should follow suit too.

> It is not pointless. It only takes one country like us to start a trend.

> I hope this government keeps up its policies. New Zealand's anti-nuclear stand is a positive step toward peace. Support a NUCLEAR FREE PACIFIC!

5.2.3 Emotional Reactions

The present data provided evidence that New Zealand adolescents were angry and incensed as they confronted the issues. They were not despondent, helpless or hopeless. Although the subjects were never directly asked about their feelings, many replied with comments which indicated that they were angry:

> Nuclear war and the arms race stink. It makes me wish I had never been born in these times. It is just hard to believe that such a few MEN* have the control over whether you live or die. They have the ability to kill everyone! NO one should have that power.
>
> U.S.A. can stick its warships up its arse.
>
> The superpowers are very greedy and selfish. If only Americans thought about other people instead of themselves all the time. Reagan should be shot.
>
> At the rate we're going, there won't be life on earth in 15 years, and that makes me really angry. It just seems so unfair, selfish and cruel (how one leader could push the button).
>
> Old people like Reagan think war is grand. Old men shouldn't be world leaders. They have closed minds and are corrupted and power hungry.
>
> I hate Reagan.
>
> Reagan is really pathetic.
>
> The day the superpowers choose to use their war toys will be a sad day for all mankind. It's outrageous that they don't care. It's our world too.
>
> If France and the U.S.A. are our allies, who needs enemies?
> (Comments about these countries were frequently accompanied by adjectives like: "pricks", "wankers", "dorks", and "idiots".)

Chivian and others (1985) noted that their Soviet sample expressed very little anger. The attitudes expressed from most other studies were largely more fearful and anxious. Only a Swedish study, one Australian study, and one other New Zealand study have reported expressions of anger to some extent.

Another attitude which cut across many comments in the questionnaires from this study was one of cynicism. The data showed that although older subjects were more informed, they were also more cynical. The prevailing

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* Women were never mentioned as collaborators in the war machine and Thatcher's name never appeared.

theme of cynicism towards politics and politicians evidently develops at adolescence or later (Greenstein, 1965; Jennings and Niemi, 1968). It made less difference to older subjects (particularly males) whether they knew that there could actually never be a nuclear war. Similarly, older subjects did not wish to know more about nuclear issues as much as the youngest age group.* Older subjects (particularly females) were much less optimistic about future peace. These results contrast with Solantaus and his colleagues (1985) who found that optimism increased with age.

Levine (1981) claimed that narcissism is considered by some to be a hallmark of adolescence. Offering further confirmation, in the whole of Millicent Poole's Australian book YOUTH: EXPECTATIONS AND TRANSITIONS (1983) there is no mention of nuclear issues or global concerns. This might lend support to such views about youth in general, or about Australian youth in particular, were it not for Mann and Digby (1984) findings. From Tables III and IV (p. 53) it might also be claimed that an appreciable portion of respondents were fatalistic (or apathetic?), particularly since these

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* The rationale for some subjects not wanting to know more about nuclear issues may be for reasons other than cynicism, however. For example, some of those who did not want to know more, qualified their answer with:

> The more I hear about nuclear weapons and war, the more I get scared. I'd rather <u>not</u> know!
>
> Knowing too much would scare me.
>
> I would rather not know, because the more I know, the worse it seems.
>
> No, because there is nothing to be optimistic about.

results account for the majority of those who believed that there is going to be a nuclear war. It seems appropriate here to cite Tyler and McGraw: "...it is particularly important that citizens believe they have an obligation to prevent war, and somewhat less important that they feel they can actually do so" (1983, p.37). In fact it was the case that, although the subjects were generally pessimistic about the future in light of the nuclear situation, on a more personal level, they expressed attitudes suggesting hope which might lead to action:

> The building up of arms for defence just provokes war. We need to support the United Nations to achieve a nuclear disarmament.
>
> Nuclear war doesn't decide whose right, only whose left. There is too much greed and materialism in the world. We must care more, share more and love humanity. We won't be able to get by, otherwise.
>
> Patriotism breeds narrowmindedness. Love of country is dangerous if it goes to the extreme like in America.
>
> Peace begins with me really.*

Similarly, Goldberg and her associates (1985) found that more concerned youth also believed they had some personal influence. McMurray and Prior (1985) disclosed that efficacy expectations were strongly associated with a level of active involvement; that those students who had had peace studies in school were more efficacious. Generally, however, they claimed that egocentric issues were of more immediate concern. Shallcrass and Gavriel (1982) have noticed an increased "shift to self" as well.

On the face of it, Levine may be correct about

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* Many subjects quoted "Imagine" by John Lennon (1968), particularly verse two (see Appendix III).

adolescent attitudes. However, Beardslee and Mack (1983) claimed that it is incorrect to conclude that youth are not worried or concerned about the nuclear issue simply because it is not spontaneously mentioned. In defence of such adolescent narrowmindedness, Bonieki (1980) concluded that *most* people's time and space horizons are limited to their immediate vicinity.

5.2.4 Political Knowledge and the Role of Education

Self-centredness and narcissism may be on the increase, but Engeström (1984) has offered a reason. He explained that the ignorance of most adolescents about international and defence issues is distinguishable by three important characteristics: compartmentalised thinking, fatalism, and ignorance. Compartmentalised thinking is exemplified by the frequent tendency for the same person to describe war in opposing ways, i.e. as glamorous and as disatrous. This appraisal might account for those subjects in this study who were both optimistic about their own personal futures, while at the same time concerned about the threat of nuclear war. It might also serve to explain some of the inconsistencies which McMurray and Prior (1985) found in their results. Where concepts of nuclear war include the view that it is uncontrollable and/or inevitable, Engeström argued that such fatalism is the result of ignorance. Young people will not be able to think in realistic and constructive ways as long as they are ill-informed.

The present data provided evidence that these adolescents were lacking knowledge; however, it was also the case that 75% wanted to know more about the

issues. Adolescents made comments like:

> INFORM US! WE NEED TO KNOW!
>
> How are we meant to know if we're not more informed about what's happening? We need more awareness programmes to make us think about it.
>
> How can we speak on the issues of today when we are not told about them?
>
> Why can't we study more about peace?

Engeström concluded that education about nuclear issues is an important way of helping youth to overcome feelings of fatalism or anxiety.

5.3 IMPLICATIONS

The implications of these research findings will be addressed relating to (1) clinical/mental health, (2) media effects, (3) political socialization and education.

5.3.1 Clinical/Mental Health Considerations

Rutter, Graham, Chadwick and Yule (1976) have suggested that young people's anxieties about nuclear war must be set within the context of their general high level of anxiety and depression. They concluded that "inner turmoil" as represented by feelings of misery, self-depreciation, fatalism and anxiety are quite common in 14 year olds. Some psychiatrists and psychologists generally suppose that adolescence is a period of great psychological upheaval and disturbance, suggesting maybe that the reactions of young people to the nuclear threat should be considered "normal".

Lifton (1982b), Lifton and Erikson (1982), and

Goldman and Greenberg (1982) believe that it is time for the mental health professional to treat the escalation of the nuclear arms race as society's most urgent mental health problem. They propose an examination of what forces produce "flawed and dangerous" thinking, what forces allow such thinking to be accepted unchallenged by the public, and how professionals, as agents of change, can treat these problems.

Halasz (1984) believed that it is the mental health professional's responsibility to evaluate whether such talk of personal or social conflicts is a reflection of normal development or indicative of a troubled adolescent asking for and in need of help. Orbach and Glaubman (1979) add a clinical dimension to the subject of fears about nuclear war. They proposed that adolescents who talk of war and death may reflect a more personal problem. Such talk may have a defensive function reflecting inner conflicts and struggles which are central issues of concern in adolescent development.

5.3.2 Media Effects and Considerations

Most studies are in agreement as to the effect of the mass media, and particularly television on development (Adler et al., 1980; Bronfenbrenner, 1975; Comstock et al., 1978; Greenberg, 1975; Himmelweit et al., 1977; Lalor, 1980). Discussing the impact of various socializing agents, Rosell (1968) stressed the influence of the mass media, which increases with age and makes a greater overall contribution to the development of views on war and peace than the influence of

parents (Stacey, 1978, p.62). New Zealand studies are in agreement that television ranks first as a source for information, with newspapers, magazines and radio rating much higher than teachers or parents. Hess and Torney (1967) have concluded that the effectiveness of parents in transmitting attitudes has been overestimated in previous research. Unlike the Canadian study, all other reviewed research suggests that Hess and Torney are correct. Beardslee and Mack (1983) confirmed that most information about nuclear issues comes from sources other than parents. Mann and Digby (1984) reported that only about one-quarter of their sample cited personal sources (i.e. parents, teachers, peers) as compared with about three-quarters who indicated mass media sources for their information. This present study confirms these findings. The implication is, then, that media sources have a great responsibility in disseminating information which is accurate and creditable. One 14 year old female replied: "I think a lot of television programmes are violent. On TV One I have seen people being shot, bashed up, stabbed, raped and blown up. I think it is a bad influence on children and adults. I would like to see a lot of changes in television ...programmes about people who don't want to kill each other."

5.3.3 Political Socialization and Educational Considerations

Hess and Torney have proposed that the school deserves greater attention and more systematic evaluation of their methods, curriculum, and timing of political

socialization. In the school curriculum, the topics and concepts that deal with civic education are usually taught unsystematically and ineffectively (1967, p.219). Considering that one-third of students in this present study claimed *not* to have studied about war in school suggests that either their history courses have deleted major events of the past or the criticisms levied bear some consideration. Hess and Torney's appraisal also advances warning to those who are planning to implement peace studies into the school curriculum, lest such studies meet with the same fate. Diorio (1985) believed that peace education is a paradoxical issue and that "conflict education" might be a more meaningful approach. He argued that if students are right that peace will not happen in their lifetime, then it is time to go about attaining realistic aims within conflict. The school apparently plays the largest part in teaching attitudes, conceptions and beliefs about the operation of the political system, and therefore its influence demands more attention.

Rathenow and Smoker (1984) have commented that the school, as an agency of socialization, has as one of its tasks the broadening of understanding about peace. They claimed there is a majority support for the idea of peace studies in schools. Markusen and Harris have argued that education should play a crucial role in reducing the threat of nuclear war: "Unless the educational institutions of democratic society provide citizens with the opportunities to learn about the facts and issues of nuclear war, the society will be severely

handicapped in its struggle for survival (1984, p.301)."

Barnet (1982) claimed that the educational system has failed to prepare young people to live in the nuclear age. Lifton (1982) has observed that universities have done virtually nothing to address the situation. In the 1980's, peace education needs to become the synonym for a movement to strengthen the awareness of young people as students about:

> the existence of conflict between people, and within and between nations. It investigates the causes of conflict and violence embedded within the perceptions, values and attitudes of individuals, as well as within the social, political and economic structures of society, and encourages the search for alternatives, including non-violent solutions, and the development of skills necessary for their implementation.*
>
> Rathenow and Smoker (1984, p.171)

Peace studies have a considerable overlap with the aims of political education. According to Rathenow and Smoker, it should not only concentrate on specific subjects such as the analysis of modern technology, but should be considered as a dimension of the whole curriculum because the issues of peace and conflict are part of everyday life and the wide world. The Report (1982) to the Education Committee of Working Party on the Development of a Curriculum for Peace Education has stated that education for peace should start from problems of everyday life in school and thus influence the climate of a school as well as the methods of teaching. Some of the major curriculum aims of the

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* Stephanie Duczek has developed this widely accepted definition of peace education together with Colin Reid and Juergen Wehmeier when being involved in the two-year Peace Studies project at the United World College of the Atlantic, South Glamorgan.

Report are:

> To foster the ability to strive for peace in relationships between individuals, groups and nations, to establish a sense of responsibility for one's decision and actions...to understand the nature of resolving conflict...to develop an understanding of justice and welfare within and between individuals and societies...and to encourage attitudes which will develop respect and a sense of personal responsibility for individual freedom and human rights, cultural diversity, the environment, and co-operation both within the classroom and outside.

Tizard (1986) suggested that well-defined courses on nuclear issues at school may help adolescents. Providing constructive channels of communication would be a major beginning. Knowing that their parents and teachers are concerned about these issues may change their perceptions of adults as ineffective and uncaring about the future, while greater intellectual understanding and more information may help to relieve their anxiety. Educating young people to the realities of the nuclear arms race so that they can at least overcome the attitudes which stem from ignorance would be a major step. The problem, then, is *how* to conduct such education.

5.4 LIMITATIONS AND RECOMMENDATIONS

This study's survey was inadvertently administered at a time when such films as "Threads" and "On the Eighth Day" were being aired on television. These two films were dramatic documentaries about the effects of a nuclear exchange. It is likely that these films affected the attitudes of some of the subjects in the sample. Additionally, the recent sabotage bombing in

Auckland harbour of an anti-nuclear protest flagship by French government-sponsored agents had the effect of heightening citizens to their vulnerability. French nuclear testing in the Pacific has been a long-standing controversy, but never before has New Zealand been the victim of such blatant open aggression. New Zealand has, in the past, been immune from the intensity of widespread concern over nuclear proliferation which is more apparent in places like Greenham Common, U.K. and Hasselbach, West Germany. Protesting of nuclear developments has been an on-going political activity in these countries. Fiske, Pratto and Pavelchak (1983) have suggested that the best predictors of anti-nuclear activity are the concreteness, availability and emotional concomitants of cognitive images. That is, people are more likely to act on their attitudes when the issue is salient to them. Zweigenhaft (1985) compared the effects of different stimulus materials on knowledge about the attitudes towards nuclear weapons. He found that certain stimuli enhance and affect attitudes about nuclear dangers. Consequently, it may have been the case that timely factors contributed to attitudes which were expressed in this study.

This social survey faced the usual disadvantages of opinion research. Self-report limited the validity of the findings. Additionally, the self-administered questionnaire was dependent on literacy, educational level and acuity of the respondents. In other research (Chivian et al., 1985; Cooper, 1965) the method of inquiry has been adjusted to suit the age level or

nationality of their subjects. In this study, in an effort to acquire some systematic empirical data, no adjustments were made with respect to age. However, it may have been appropriate to have had a somewhat simplified format for the youngest age group, if the sample is to incorporate such a wide age range. The use of a standardised questionnaire also limited the variety of individual responses. However, open-ended interviews (as used by Beardslee and Mack, 1982, 1983; Escalona, 1962, 1963 and 1965; Schwebel, 1965) would have limited meaningful comparison and increased the likelihood of subjectivity. There is some hesitance to suggest that the research findings were entirely objectively substantiated - a projected aim of this study.

If this research were to be repeated, some suggestions might be considered:

(1) Identify (by open-ended response) each subject's three greatest concerns in rank order *before* the questionnaire is administered.

(2) Replace Section I of the questionnaire with a Likert-type scale (using an agree/disagree format) and check for response-category bias in Section III. According to Furnham (1985), half the items should ideally represent left and half right political views. In this study, the items were slightly skewed towards right political views.

(3) Include questions relating directly to PEACE, HOPES, MECHANISMS used by youth to cope with their concerns.

Martin (1982) impressed the need for more attention to what people can *do* to oppose nuclear war in their daily lives and less attention to the dangers of it.

(4) As an investigator, this type of research should be pursued in association with others. Dealing in isolation with these issues can be awesome.

In this study, it has been possible to consider only a fraction of the many aspects of the nuclear issue that deserve inquiry. There have been virtually no studies of the relation between the level of anxiety in young people about nuclear issues and their level of understanding of them.

Another major area of interest is how the media (and significant others, like parents) transmit values on to young people. Additionally, it is not clear whether the nuclear threat has in any way directly resulted in an overall increase in their anxiety and unhappiness. It has also not been conclusively established that the nuclear threat has affected personality development (Tizard, 1986). There is still a lack of understanding of the factors which influence adolescent attitudes, anxieties and knowledge of nuclear war. These are research questions yet to be explored.

CHAPTER SIX

CONCLUSIONS

This study has investigated the awareness of 570 New Zealand adolescents and examined their cognitive, emotional and political reactions towards nuclear issues and towards New Zealand's nuclear prospects in world affairs. Most of these young people were found to have some degree of political awareness and ideas which were pessimistic about the future in the wider realm, but were more optimistic about their own personal future. The level of political understanding about nuclear issues and New Zealand's political prospects in world affairs varied widely, between individuals, and by sex and age. In spite of the diversity of comments which arose from the qualitative analysis of comments throughout the sample, a pattern emerged for the majority. Most of these youth were concerned and many expressed anger about the prospects of nuclear war, but they were not despondent. In line with some research from Canada, Finland, Sweden and the Soviet Union, these youth appeared to have been responding to the issues in a positive way.

Anxiety associated with feelings of helplessness and hopelessness, as cited in much of the research from the United States, remains less pronounced in the New Zealand studies which deal with nuclear issues. However, nearly half of the sample from this present study believed that there would be a nuclear war in the future and that New Zealand has enemies. Yet, there

was not a consensus over who was most likely to be New Zealand's enemies. Volkan (1985) has described a developmental phenomenon, the "need for enemies", as a manipulation with psychological roots which needs to be better understood. There was much evidence that young people were cynical, and cynicism appears to increase with age. However, a tendency for youth to focus more positively on personal concerns was also apparent. Narcissism, according to Engeström (1984) is due to compartmentalised thinking, fatalism and ignorance.

Most adolescents were aware of nuclear issues, but few had much advanced understanding or comprehensive knowledge. These same youth wanted to be more knowledgeable and desired more accurate information. Tizard (1984, 1986) sees a need for nuclear education, but highlights the problematic aspects of approaching the task. Any attempt to encourage informed thinking on nuclear issues needs to take into account a wide range of intellectual context which includes the values, the beliefs and the attitudes of the young people concerned. School is an important agent for political socialization and to rely solely on the dispensing of information is not enough. There is a need for more systematic evaluation of the methods, curriculum and timing of political socialization. A closer appraisal of these factors might provide a much better idea of the influences (media, parents, etc.) on adolescent attitudes and the strategies that are more likely to be successful in encouraging clear thinking about nuclear issues. These are matters for consideration with the

planned introduction of peace studies in New Zealand schools in 1987.

This investigation warrants further research which can accurately assess the impact of nuclear issues on adolescent beliefs, and can make progress towards explaining the discrepancies between research findings. It has not been satisfactorily substantiated that living in the nuclear age has affected personality development in ways which can be measured, although many psychiatrists and others believe this to be the case. It may be increasingly difficult to differentiate between those adolescent reactions which are normal and those which are pathological, given the ever present threat of nuclear war.

This study was clearly exploratory and it would not be advisable to draw causal inferences from the data. Nonetheless, the results strongly supported the viewpoint that an understanding of adolescent psychological interpretations of social issues can contribute to the understanding of subsequent social or political involvement. Attempts to encourage critical and informed thought regarding nuclear issues may be more difficult and, more of a political process than is often supposed. Exposure to nuclear issues should ideally leave adolescents with an increased awareness which allows them to confront the issues. The educational system and the mass media are two important avenues for providing this information. A deliberate focus on what nations have in common would help to counter the tendency to view what is different, perhaps antagonistic, in other nations. A greater understanding of the

development of political belief systems and how those beliefs are maintained is necessary to clarify these matters. Such considerations remain for future research.

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APPENDIX I

UNIVERSITY OF CANTERBURY DEPARTMENT OF PSYCHOLOGY

HIGH SCHOOL SOCIAL SURVEY

of

NEW ZEALAND PROSPECTS & WORLD AFFAIRS

This survey looks at various social issues relating to war and peace and how such issues affect New Zealand and the rest of the world. A study is being conducted by a postgraduate university researcher who is interested in how young people see these issues in 1985, how their notions may have developed and what their conceptions of the future may indicate.

Instructions:

The following statements in this section may or may not be important to you. This survey would like to know to what extent you agree with each of the following statements. Please rate (on the 7-point scale) the AMOUNT THAT YOU AGREE with each of the following statements.

Here is an example:- The past was DIFFERENT compared to 1985.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme amount of agreement			moderate amount of agreement			not-at-all

"1" means that you agree with the statement an extreme amount.
"2" means that you agree with the statement very much.
"3" means that you agree with the statement a moderately more amount.
"4" means that you agree with the statement a moderate amount.
"5" means that you agree with the statement a moderately less amount.
"6" means that you agree with the statement not very much.
"7" means that you agree with the statement not-at-all.

Please tick (☑) your personal answer in the appropriate box for each statement. Feel free to make additional comments if you want to explain.

SECTION I

* 1. Year 2000 will be DIFFERENT, compared to 1985.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme amount of agreement			moderate amount of agreement			not-at-all

2. MY LIFE will be better in 15 years.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme amount of agreement			moderate amount of agreement			not-at-all

3. MY LIFE will be better than MY PARENTS' LIFE has been.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme			moderate			not-at-all

4. Aggressive and violent behaviour are part of 'human nature'.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme			moderate			not-at-all

5. Human beings are capable of causing environmental damage to the earth which cannot be reversed.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme			moderate			not-at-all

6. LIFE IN NEW ZEALAND will be better in 15 years.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme			moderate			not-at-all

7. LIFE-ON-EARTH will be better in 15 years.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme			moderate			not-at-all

8. Nuclear testing in the Pacific directly affects New Zealand.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme amount of agreement			moderate amount of agreement			not-at-all

9. There is <u>UNLIKELY</u> to be a nuclear war in the future.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme			moderate			not-at-all

10. If there were ever a World War III, it would certainly be a nuclear war.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme			moderate			not-at-all

11. A nuclear war in the northern hemisphere would impact upon N.Z.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme			moderate			not-at-all

12. NZ's Civil Defence Organisation and NZ's health services are prepared in event of a nuclear war in the northern hemisphere.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme			moderate			not-at-all

13. NZ's Civil Defence Organisation and NZ's health services are prepared in event of a nuclear war reaching Australia and NZ.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme			moderate			not-at-all

14. It would make a DIFFERENCE to me if I knew that there could actually NEVER be a nuclear war.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme amount of agreement			moderate amount of agreement			not-at-all

15. Smaller countries like NZ might help to prevent a nuclear war.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme			moderate			not-at-all

16. Interested and concerned GROUPS OF PEOPLE might help to prevent a nuclear war; for example, peace groups.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme			moderate			not-at-all

17. INDIVIDUAL PEOPLE might help to prevent a nuclear war.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme			moderate			not-at-all

18. I hope that MY EXPECTATIONS about the future are correct.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme			moderate			not-at-all

19. It is easy for me to ACCEPT my own expectations about the future.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
extreme			moderate			not-at-all

20. I am NOT OPTIMISTIC or HOPEFUL about the future for humanity.

☐	☐	☐	☐	☐	☐	☐
1 extreme amount of agreement	2	3	4 moderate amount of agreement	5	6	7 not-at-all

---

SECTION II

Please tick (☑) your personal answer(s) in the appropriate box for each item.

1 (a) Have you seen, heard or read anything about nuclear issues? YES ☐ NO ☐

If YES, then tick (☑) the sources of your information:

☐ books	☐ tv	☐ parents
☐ magazines	☐ films	☐ relatives
☐ newspapers	☐ videos	☐ teachers
☐ radio	☐ friends	☐ other sources

1 (b) Now go BACK to the list and (circle) those sources of information which were most believable.

*2. Do you think that some news should be censored? YES ☐ NO ☐

3. Has WAR been considered as an issue in any of your class subjects or coursework at school? YES ☐ NO ☐

4. Has PEACE been considered as an issue in any of your class subjects or coursework at school? YES ☐ NO ☐

5. Have NUCLEAR ISSUES been considered in any of your class subjects or coursework at school? YES ☐ NO ☐

6. Would you like to know MORE about nuclear issues? YES ☐ NO ☐

		YES	NO
7.	Do you think that NON-NUCLEAR or CONVENTIONAL warfare can ever be justified?	☐	☐
8.	Do you think NUCLEAR warfare can ever be justified?	☐	☐
9.	Do you think nuclear weapons are an EFFECTIVE DETERRENT to nuclear war?	☐	☐
10.	Would you let the prospects of a nuclear war affect your career plans?	☐	☐
11.	Would you let the prospects of a nuclear war affect your plans to ever have children?	☐	☐
12.	Do you approve of NZ's ban on entry of NUCLEAR-POWERED vessels into NZ's ports?	☐	☐
13.	Do you approve of NZ's ban on entry of NUCLEAR-ARMED vessels into NZ's ports?	☐	☐
14.	Do you feel MORE SECURE without nuclear-powered or nuclear-armed ships visiting NZ ports?	☐	☐
15.	Do you ever have dreams or nightmares involving nuclear warfare or nuclear weapons?	☐	☐
16.	Does the back cover of the local telephone book (concerning Civil Defence emergencies) tell you what to do in the event of nuclear fallout?	☐	☐
17.	Does NZ ITSELF have any foreign enemies?	☐	☐
18.	Do ANY countries need nuclear weapons?	☐	☐
19.	Is it desirable to have small-scale nuclear weapons that a country can use on a LIMITED BASIS?	☐	☐

20 (a) Which countries have their OWN nuclear weapons?

☐ Australia	☐ Great Britain	☐ Pakistan
☐ Canada	☐ India	☐ South Africa
☐ China	☐ Israel	☐ U.S.A.
☐ France	☐ Japan	☐ U.S.S.R.

20 (b) Now go BACK to the list and (circle) any country which has dropped nuclear weapons on the population of another country.

	YES	NO
21. Do you think that the U.S.A. is more likely to launch a nuclear 'first strike' than the U.S.S.R.?	☐	☐
22. Do you think that a country other than the U.S.A. or the U.S.S.R. could start a nuclear war?	☐	☐
23. Do you think that the U.S.S.R. could win a nuclear war?	☐	☐
24. Do you think that the U.S.A. could win a nuclear war?	☐	☐
25. Do you think that the U.S.A. is more determined than the U.S.S.R. to reduce the number of nuclear arms?	☐	☐
26. Would you want to be a survivor of a nuclear war?	☐	☐
27. Do you think that the U.S.S.R. is more determined than the U.S.A. to reduce the number of nuclear arms?	☐	☐
28. In the future, do you think that there will be LESS conflict between COUNTRIES?	☐	☐
29. Do you think that nuclear war is prophesised in the Bible?	☐	☐
30. Do you think that peace and cooperation between all countries will happen in your lifetime?	☐	☐

SECTION III

Please tick (☑) the following statements/words depending on whether you have a reaction or feeling towards them. If you have a POSITIVE (+) reaction, tick "YES" and if you have a NEGATIVE (-) reaction, tick "NO". If you are UNSURE or have NO OPINION, tick "?"

	YES	?	NO
* Aid to developing countries	☐	☐	☐
ANZUS (Australia/New Zealand/USA Treaty)	☐	☐	☐
Armageddon (final supreme conflict among nations)	☐	☐	☐
Arms race (competition between countries for arms' superiority)	☐	☐	☐
Atheism (disbelief in God)	☐	☐	☐
* CER (closer economic relations with Australia)	☐	☐	☐
CND (Campaign for Nuclear Disarmament)	☐	☐	☐
Comecon (East European Economic Community)	☐	☐	☐
Compulsory military training for young adults	☐	☐	☐
Decreasing military defence spending in NZ	☐	☐	☐
EEC (European Economic Community)	☐	☐	☐
Faith in God	☐	☐	☐
HART (Halt All Racist Tours)	☐	☐	☐
* Love of country (national pride)	☐	☐	☐
Materialism (acquiring money & possessions)	☐	☐	☐
Multinational interests (big corporations' activities in many countries)	☐	☐	☐

	YES	?	NO
NACIA (Nelson Action Committee on International Affairs - Nelson's peace organization)	☐	☐	☐
* National independence (self-governing nationhood)	☐	☐	☐
NATO (North Atlantic Treaty Organisation)	☐	☐	☐
Non-alignment in international affairs	☐	☐	☐
Nuclear deterrence	☐	☐	☐
Nuclear missiles	☐	☐	☐
Nuclear power stations	☐	☐	☐
Racial inequality	☐	☐	☐
Religion	☐	☐	☐
Royalty	☐	☐	☐
SCEPTRE (a Nelson organization which supports existing Western alliances)	☐	☐	☐
Social welfare programmes	☐	☐	☐
Star Wars (United States' Strategic Defence Initiative in Space)	☐	☐	☐
Superpowers (extremely powerful nuclear nations)	☐	☐	☐
Trade Unions	☐	☐	☐
Unemployment	☐	☐	☐
Warning systems of nuclear missile attack	☐	☐	☐
Warsaw Pact (Eastern European Mutual Assistance Treaty)	☐	☐	☐

SECTION IV

	14	15	16	17	18
My age is	☐	☐	☐	☐	☐

	Male	Female
My sex is	☐	☐

Please feel free to make additional comments if you want to explain any of your answers or make further comments about New Zealand's prospects and world affairs which reflect your own ideas.

Thank you for your time and cooperation in completing this survey.

APPENDIX II

FREQUENCY COUNT

Total Percentages of Occurrence for Variables obtained from the Social Survey Questionnaire

(Total number (N) of subjects = 570)

VARIABLE	NUMBER OF RESPONDENTS	PERCENTAGE OF TOTAL
SECTION IV	N	%
College:		
SSG (single sex girls')	136	24
RUR (rural)	132	23
SUB (suburban)	163	29
SSB (single sex boys')	139	24
Age:		
13-14	150	26
15-16	240	42
17-18	180	32
Sex:		
male	287	50
female	283	50
Comments:		
constructive (positive)	371	65
destructive (negative)	10	2
none	189	33
SECTION I		
2000 A.D. will be *different*		
1-2 yes, very much	294	52
3-4	247	43
5-6	25	4
7 no, not at all	4	1

VARIABLE	NUMBER OF RESPONDENTS N	PERCENTAGE OF TOTAL %
My life (in 2000 AD) will be better		
1-2 yes, very much	86	15
3-4	259	45
5-6	158	28
7 no, not at all	67	12
My life will be better compared with *parents' life*		
1-2 yes, very much	92	16
3-4	219	38
5-6	169	30
7 no, not at all	90	16
Life in *New Zealand* (in 2000 AD) will be better		
1-2 yes, very much	38	7
3-4	217	38
5-6	215	38
7 no, not at all	100	18
Life on *Earth* (in 2000 AD) will be better		
1-2 yes, very much	23	4
3-4	154	27
5-6	260	46
7 no, not at all	133	23
Aggression and violence are *innate* in humans		
1-2 yes, very much	145	25
3-4	200	35
5-6	179	31
7 no, not at all	46	8

VARIABLE	NUMBER OF RESPONDENTS	PERCENTAGE OF TOTAL
	N	%
Humans can cause irreversible *environmental damage*		
1-2 yes, very much	466	82
3-4	81	14
5-6	16	3
7 no, not at all	7	1
Pacific nuclear testing affects New Zealand		
1-2 yes, very much	273	48
3-4	198	35
5-6	80	14
7 no, not at all	19	3
Unlikelihood of nuclear war		
1-2 agree very much	35	6
3-4	60	11
5-6	205	36
7 disagree	270	47
Likelihood of nuclear war if World War III		
1-2 agree very much	409	72
3-4	105	18
5-6	46	8
7 disagree	10	2
Impact of a northern hemisphere nuclear war on New Zealand		
1-2 yes, very much	390	68
3-4	140	25
5-6	33	6
7 no, not at all	7	1

VARIABLE	NUMBER OF RESPONDENTS N	PERCENTAGE OF TOTAL %
Preparedness of New Zealand's civil defence (if nuclear war in northern hemisphere)		
1-2 yes, very much	23	4
3-4	124	22
5-6	239	42
7 no, not at all	184	32
Preparedness of New Zealand's civil defence (if nuclear war in Australia/New Zealand)		
1-2 yes, very much	22	4
3-4	104	18
5-6	177	31
7 no, not at all		
Knowing there'll be no nuclear war would *make a difference*		
1-2 yes, very much	353	62
3-4	99	17
5-6	58	10
7 no, not at all	60	11
Smaller countries (like New Zealand) might help prevent war		
1-2 yes, very much	191	34
3-4	210	37
5-6	115	20
7 no, not at all	54	10
Groups of people might help prevent war		
1-2 yes, very much	177	31
3-4	235	41
5-6	112	20
7 no, not at all	46	8

VARIABLE	NUMBER OF RESPONDENTS N	PERCENTAGE OF TOTAL %
Individual people might help prevent war		
1-2 yes, very much	123	22
3-4	179	31
5-6	180	32
7 no, not at all	88	15
Hopeful about own expectations		
1-2	249	44
3-4	177	31
5-6	69	12
7 no, not at all	75	13
Acceptance of own expectations		
1-2 yes, very much	156	27
3-4	260	46
5-6	113	20
7 no, not at all	41	7
Pessimism about the future		
1-2 yes, very much	165	29
3-4	213	37
5-6	133	23
7 no, not at all	59	10

VARIABLE	NUMBER OF RESPONDENTS	PERCENTAGE OF TOTAL
SECTION II	N	%
Awareness of nuclear issues		
yes	565	99

	Sources		Most Believable	
	N	%	N	%
books	345	61	165	29
magazines	450	79	210	37
newspapers	464	81	239	42
radio	423	74	184	32
TV	530	93	375	66
films	414	73	220	39
video	233	41	119	21
friends	366	64	29	5
parents	339	60	96	17
teachers	394	69	99	17
relatives	157	28	17	3

	N	%
Belief in *censorship*		
yes	95	17
War studied in school		
yes	344	60
Peace studied in school		
yes	226	40
Nuclear issues studied in school		
yes	338	59
Desire to *know more* about nuclear issues		
yes	426	75
Justification for *conventional warfare*		
yes	183	32

VARIABLE	NUMBER OF RESPONDENTS N	PERCENTAGE OF TOTAL %
Justification for *nuclear warfare*		
yes	68	12
Nuclear weapons are *effective deterrents*		
yes	180	32
Career plans affected if prospects of nuclear war		
yes	99	17
Plans for children affected if prospects of nuclear war		
yes	197	35
Approval of ban on *nuclear-powered ships*		
yes	378	66
Approval of ban on *nuclear-armed ships*		
yes	479	84
Feel *more secure* without nuclear ship visits		
yes	314	55
Occurrence of *dreams or nightmares* about nuclear war		
yes	131	23
Presence of *civil defence emergency fallout information* (in telephone book)		
yes	22	4
New Zealand has *enemies*		
yes	262	46

VARIABLE	NUMBER OF RESPONDENTS N	PERCENTAGE OF TOTAL %
Some countries *need* nuclear weapons		
yes	43	8
Desirability of nuclear weapons on a *limited basis*		
yes	52	9
Countries with their *own nuclear weapons*		
yes, Australia	83	15
Canada	146	26
China	300	53
France	524	92
Great Britain	429	75
India	170	30
Israel	121	21
Japan	173	30
Pakistan	63	11
South Africa	112	20
U.S.A.	567	> 99
U.S.S.R.	567	> 99
Countries which have *dropped* nuclear weapons on the population of another country		
yes, Australia	8	1
Canada	3	< 1
China	5	1
France	25	4
Great Britain	23	4
India	1	-
Israel	7	1
Japan	9	2
Pakistan	6	1
South Africa	2	-
U.S.A.	449	79
U.S.S.R.	23	4

VARIABLE	NUMBER OF RESPONDENTS N	PERCENTAGE OF TOTAL %
Likelihood of U.S.A. launching a *first-strike* (rather than (U.S.S.R.)		
yes	221	39
Likelihood of *another country* starting a nuclear war		
yes	437	77
U.S.S.R. could *win* a nuclear war		
yes	127	22
U.S.A. could *win* a nuclear war		
yes	108	19
U.S.A. *more determined* to arms reduction (than U.S.S.R.)		
yes	120	21
U.S.S.R. *more determined* to arms reduction (than U.S.A.)		
yes	153	26
Desire to be a *survivor* of a nuclear war		
yes	136	24
There will be *less conflict* between countries in future		
yes	113	20
The *Bible predicts* nuclear war		
yes	197	35
Peace and co-operation between countries will happen in this lifetime		
yes	88	15

VARIABLE	NUMBER OF RESPONDENTS	PERCENTAGE OF TOTAL
	N	%
SECTION III		% "yes" of total yes/no responses
Aid to developing countries		
yes	442	93
ANZUS (Australia/N.Z./U.S.A. Treaty)		
yes	262	68
Armegeddon (final supreme conflict among nations)		
yes	64	20
Arms race		
yes	62	12
Atheism (disbelief in God)		
yes	105	29
C.E.R. (closer economic relations with Australia)		
yes	405	92
C.N.D. (Campaign for Nuclear Disarmament)		
yes	426	90
Comecon (East European Economic Community)		
yes	109	58
Compulsory military training for young adults		
yes	75	16
Decreased military defence spending in New Zealand		
yes	197	51
E.E.C. (European Economic Community)		
yes	170	60

VARIABLE	NUMBER OF RESPONDENTS N	PERCENTAGE OF TOTAL % "yes" of total yes/no responses
Faith in God		
yes	271	71
H.A.R.T. (Halt All Racist Tours)		
yes	232	53
Love of country (national pride)		
yes	392	90
Materialism		
yes	131	42
Multinational interests		
Yes	184	81
N.A.C.I.A. (a peace organisation)		
yes	307	88
National independence		
yes	264	74
N.A.T.O. (North Atlantic Treaty Organisation)		
yes	229	76
Non-alignment in international affairs		
yes	103	53
Nuclear deterrence		
yes	265	62
Nuclear missiles		
yes	35	7
Nuclear power stations		
yes	129	28
Racial inequality		
yes	62	12

VARIABLE	NUMBER OF RESPONDENTS	PERCENTAGE OF TOTAL
	N	%
		% "yes" of total yes/no responses
Religion		
yes	263	69
Royalty		
yes	208	57
S.C.E.P.T.R.E. (an organisation supporting western alliances)		
yes	90	44
Social welfare programmes		
yes	436	94
Star Wars (U.S. Strategic Defence Initiative in Space)		
yes	24	4
Superpowers		
yes	36	7
Trade Unions		
yes	188	58
Unemployment		
yes	54	11
Warning systems of nuclear missile attack		
yes	308	70
Warsaw Pact (Eastern European Mutual Assistance)		
yes	157	62

APPENDIX III

"IMAGINE"

by John Lennon

(1968)

Imagine there's no heaven
it's easy if you try
no hell below us
above us only sky
imagine all the people
living for today ...

Imagine there's no countries
it isn't hard to do
nothing to kill or die for
and no religion too
imagine all the people
living life in peace ...

Imagine no possessions
I wonder if you can
no need for greed or hunger
a brotherhood of man
imagine all the people
sharing all the world ...

You may say I'm a dreamer
but I'm not the only one
I hope someday you'll join us
and the world will be as one.